UNITED STATES DISTRICT COURT EASTERN DISTRICT OF NEW YORK

Nº 11-CV-4550 (JFB)(SIL)

EASYWEB INNOVATIONS, LLC,

Plaintiff.

VERSUS

TWITTER, INC.,

Defendant.

MEMORANDUM AND ORDER

March 30, 2016

JOSEPH F. BIANCO, District Judge:

Plaintiff EasyWeb Innovations, LLC ("EasyWeb") brings this patent infringement action against defendant Twitter, Inc. ("Twitter"), alleging that Twitter directly and indirectly infringes asserted claims in five patents assigned to EasyWeb: U.S. Patent No. 7,032,030 ("the '030 Patent"), titled "Message Publishing System and Method"; U.S. Patent No. 7,596,606 ("the '606 Patent"), titled "Message Publishing System for Publishing Messages from Identified, Authorized Senders"; U.S. Patent No. 7,685,247 ("the '247 Patent"), titled "System for Publishing and Converting Messages from Identified, Authorized Senders"); U.S. Patent No. 7,689,658 ("the '658 Patent"), titled "Method for Publishing Messages from Identified, Authorized Senders to Subscribers"; and U.S. Patent No. 7,698,372 ("the '372 Patent"), titled "System for Publishing Messages from Identified, Authorized Senders to Subscribers" (collectively, the "patents-in-suit"). The asserted independent claims are Claims 1 and 17 of the '030 Patent, Claims 1 and 18 of the '606 Patent, and Claim 1 in '247, '658, and '327 Patents.

Three motions are before the Court. First, the parties move for the construction of the disputed claims in the patents-in-suit. The Court construes the most significant and dispositive language below. Second, the parties move for summary judgment pursuant to Federal Rule of Civil Procedure 56. Twitter contends that summary judgment is warranted because (1) Twitter does not infringe the patents-in-suit under the proper construction of the claims; (2) EasyWeb has no admissible evidence of damages; and (3) under certain claim constructions, the asserted claims of the patents-in-suit are invalid as anticipated, obvious, for lack of written description, and for claiming abstract ideas. EasyWeb, which also moves to strike the Declaration of Christopher Butler ("the Butler Declaration") proffered by Twitter to authenticate documents generated from the Internet Archive's Wayback Machine, moves for partial summary judgment on Twitter's

invalidity defenses of anticipation, obviousness, lack of written description, lack of enablement, and lack of patentability for claiming abstract ideas.

The Court first concludes that summary judgment in favor of Twitter is warranted as to Twitter's patentability of abstract ideas defense because the patents-in-suit are directed to a patent ineligible concept and do not include an inventive concept sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself. Even assuming that the patents-in-suit were patentable, the Court concludes, in the alternative, that Twitter did not infringe EasyWeb's patents. A patent may cover different or after-arising technology through its literal terms or the "doctrine of equivalents," which allows patentees to gain exclusivity beyond the literal claims. A court, however, cannot ignore the actual scope of what a patentee has invented. This litigation involves an assignee attempting to rewrite patent claims to capture technology outside the claims' proper scope—a scope the assignee recognized in earlier lawsuits against different companies—without intrinsic or extrinsic support for such interpretations. For the reasons set forth below and, specifically, because of the proper construction of the terms "format" and "central processor," the Court grants summary judgment of noninfringement to Twitter. The uncontroverted evidence establishes that Twitter's system does not authenticate senders based on the "format of the message," and its distributed server architecture does not read upon the proper construction of "central processor." Therefore, it is irrelevant whether EasyWeb has admissible evidence of damages. Moreover, in light of the Court's holdings on nonpatentability and noninfringement, the Court need not address the other defenses raised by Twitter.

I. BACKGROUND

A. Factual Background

In this section, the Court broadly details the patents-in-suit and Twitter's accused technology. The Court takes the facts set forth herein from the patents-in-suit, and the parties' declarations, depositions, exhibits, and Rule 56.1 Statements of Fact. Unless otherwise noted, each fact is undisputed or the opposing party has not pointed to any contradictory evidence in the record. Where a party's Rule 56.1 Statement contains specific citations to the record as support, the Court cites to the Rule 56.1 Statement, rather than the underlying citation to the record. As to each crossmotion, the Court construes the facts in the light most favorable to the non-moving party. *See Capobianco v. City of New York*, 422 F.3d 47, 50 n.1 (2d Cir. 2005).

1. The Patents-in-Suit

Beginning in 2006, the U.S. Patent & Trademark Office ("USPTO") issued the patents-insuit to John Codignotto ("Codignotto"), who assigned them to EasyWeb. (*See* '030 Patent, Li Markman Decl. Ex. A; '606 Patent, Novikov MSJ Decl. Ex. 24; '247 Patent, Li Markman Decl. Ex. B; '658 Patent, Novikov MSJ Decl. Ex. 26; '327 Patent, Novikov MSJ Decl. Ex. 27.) Codignotto conceived of the underlying idea no earlier than January 23, 1998. (Def. 56.1 ¶1.) As far as he knew, people could publish information on the Internet in two ways: (1) own or have access to a computer, web publishing software "that is specifically capable of working with webpages" (*i.e.*, HTML-type files), and an Internet server; and have the technical knowledge to use these items; or (2) hire a "webmaster" to create, publish, and maintain the content. ('030 Patent

at 2:60–3:15; *see* Codignotto Dep. at 76:1–5, Novikov MSJ Decl. Ex. 1.) This could be "a daunting task," and Codignotto wanted to find a solution "[t]o truly allow virtually anyone to publish a message on the Internet." ('030 Patent at 2:59–60, 4:30–32; Codignotto Dep. at 73:8–9.) Codignotto first determined that the invention could be practiced with a fax machine. Upon receiving a fax, the invention "would handle the process of . . . tak[ing] the fax, convert[ing] it into a digital format[, t]hen convert[ing] it into a webpage[, t]hen post[ing] it on a web server on the internet." (Codignotto Dep. at 73:10–74:12.) Codignotto soon decided that the system could be extended to allow posting of email and telephone voice messages to the Internet as well. (*Id.* at 81:21–82:15.) Thus, "in essence, the invention allows virtually anyone to automatically create a new website, complete with multiple webpages, by using just a telephone or fax machine" or email. ('030 Patent at 44:61–64.)

The '030 Patent discloses a "Message Publishing System ("MPS") and method," whereby a user of the MPS sends the message to be published to the MPS; the MPS verifies that the sender is an authorized user before publishing the message; and the MPS "converts the received message into one or more formats, preferably webpage(s) for display on the Internet." ('030 Patent at Abstract.) The message is stored in a network storage area, and "[w]hen the MPS receives a request for the message, it retrieves the requested message from the storage area and sends it to the requester for review." (*Id.*) "It is a primary object of the invention to allow virtually any person or organization to easily publish a message on the Internet that can be simultaneously reviewed by a mass number of people from around the world. (*Id.* at 4:36–39.) The other patents-in-suit disclose a similar invention, with subtle distinctions.

2. Twitter's Technology

EasyWeb alleges that Twitter, a social networking site created in 2006 by Jack Dorsey, Evan Williams, and Biz Stone (Def. 56.1 ¶ 27), infringes the patents-in-suit through the operation of its "twitter.com" website and service. Twitter.com allows users to publish "tweets," which are messages of 140 characters or less. (*Id.* ¶ 32.) According to Twitter's expert, Paul Clark ("Clark"), "Twitter accepts messages for publication from a user in one (or a combination) of four formats: Tweets may be in text, and/or in one of the three supported image formats, JPG, PNG, and GIF." (Clark Noninfringement Report ¶ 163, Clark MSJ Decl. Ex. B.) Users can send tweets using a web browser, mobile applications, SMS ("Short Messaging Service"), or MMS ("Multimedia Messaging Service"). (Def. 56.1 ¶¶ 35, 44, 50.)

To send a tweet using a browser, a user must first log in to twitter.com. (Id. ¶ 36.) When a user loads twitter.com, the browser receives a cookie, which is an alphanumeric text string. (Id. ¶¶ 37–38.) To send a tweet, the user must type the text of the tweet (if any) into a box. (Id. ¶ 39.) When a user clicks the "Tweet" button, the browser places the text of the tweet (if any) into a HTTP ("Hypertext Transfer Protocol") POST wrapper—a data structure that permits a browser to submit data to a remote server over the World Wide Web. (Id. ¶¶ 40–41.) The HTTP POST wrapper has a header that contains a cookie. (Id. ¶ 42.) Upon receiving an HTTP POST wrapper, Twitter's servers in its data center in Sacramento, California extract the text of the tweet (if any)

¹ Codignotto's prototype of his invention was a software program to receive faxes and post fax pages to the Internet, which ran on a single computer with a fax modem and an Internet connection. (Def. 56.1 ¶¶ 2−4.)

in the form of plain text. $(Id. \P 43.)^2$ The data center contains approximately 480 server clusters, with between 1 and 3300 servers in each cluster. $(Id. \P 60.)$ The clusters perform specific, different functions during the message publishing process: one cluster receives the tweet, another cluster authenticates users, a separate cluster stores the tweet, and a separate cluster publishes the tweet. (Contreras Decl. $\P 22.$)

A user also can tweet using a mobile application, such as Twitter for iOS or Twitter for Android. (Def. 56.1 ¶ 44.) The first time a user loads a mobile application, she is prompted to input a username and password, which is transmitted to Twitter. (*Id.* ¶ 15.) After Twitter receives the username and password, it issues an OAuth token—a set of letters and numbers that uniquely identifies the user—to the mobile device. (*Id.* ¶¶ 46–47.) Twitter issues a different OAuth token for each application or third party website that a user uses to tweet. (Contreras Decl. ¶ 16.) A mobile tweet is sent in an HTTP POST wrapper. (Def. 56.1 ¶ 48.) It is entered and transmitted in the same way as a web tweet, except that the header of its HTTP POST wrapper does not include a cookie, but instead an OAuth token. (*Id.* ¶ 49.) According to Contreras, "[c]ookies and OAuth tokens are simply ways that a web browser or application can prove that it's the same web browser or application into which the user entered their username and password when they logged in." (Contreras Decl. ¶ 17.)

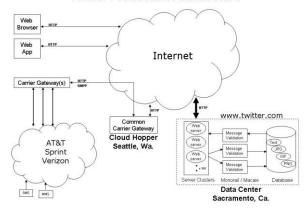
A user also can tweet using a mobile phone by sending an SMS text message to a special, designated phone number. (Def. 56.1 ¶ 50.) According to Clark, when a user sends an SMS tweet, the mobile device encodes the message as a string of bytes and transmits the message over the cellular radio link to the cellular telephone carrier. (*Id.* ¶ 51.) A computer at the carrier then sends the message to a Twitter facility in Seattle, Washington, where the servers run software called Cloudhopper. (*Id.* ¶¶ 52, 53.) The messages are forwarded to Twitter using either the SMPP ("Short Message Peer-to-Peer") protocol or the HTTP protocol. (*Id.* ¶ 54.) Cloudhopper then sends to Twitter's servers the text of the tweet, along with the user's telephone number, in an HTTP POST wrapper. (*Id.* ¶ 55.) In Sacramento, Twitter's software receives the tweet, looks at the telephone number in the HTTP POST wrapper to determine which user sent the tweet, and posts the tweet to the user's timeline. ¶ 56; Clark Noninfringement Report ¶¶ 177–80.)

² EasyWeb claims there is insufficient evidence of these facts from the declaration of Dana Contreras, a Senior Software Engineer at Twitter (Contreras Decl. ¶ 1). (Pl. 56.1 Reply ¶¶ 40−43.) The Court disagrees. Contreras says she has personal knowledge of these facts, (Contreras Decl. ¶ 2), and EasyWeb proffers no contradictory evidence.

³ According to Clark, "[m]ost messages from each kind of device"—browser, application, or mobile phone—"use the same web HTTP protocol for organizing and communicating the data that is sent to Twitter. While some SMS messages are received by Cloudhopper by the SMPP protocol, these Tweets are authenticated with the same phone number information received from the carriers that is used for the SMS messages sent via HTTP. The identification does not depend on the protocol." (Clark Noninfringement Report ¶ 179.)

Clark depicts Twitter's architecture as follows:

Twitter Production Architecture



B. Procedural Background

EasyWeb commenced this action on September 19, 2011. Twitter answered the complaint on November 10, 2011. The Court denied Twitter's motion to change venue on October 16, 2012. Twitter moved for summary judgment and filed its opening claim construction brief on March 1, 2013. EasyWeb moved for summary judgment on March 1, 2013, and filed its opening claim construction brief on March 2, 2013. Twitter filed its responsive papers on April 5, 2013. EasyWeb filed its responsive claim construction brief on April 5, 2013, and its opposition to summary judgment on April 8, 2013. The parties filed their respective replies in support of summary judgment on April 19, 2013. EasyWeb moved to strike the Butler Declaration on April 19, 2013, and Twitter opposed on April 23, 2013. EasyWeb filed a supplemental reply to Twitter's opposition to summary judgment, addressing evidence submitted by Butler, on August 16, 2013. Twitter responded on September 3, 2013. The Court held oral argument on the motions on June 28, 2013. 4 On July 3, 2014, after the Supreme Court issued its decision in *Alice Corp. v. CLS Bank*

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⁴ Given that the uncontroverted evidence, including the language of the patents and the testimony of EasyWeb's own expert, demonstrates noninfringement, the Court did not hold a Markman hearing. "The express purpose of such a socalled 'Markman hearing is for the court to interpret the claims of a contested patent.'" Safe-Strap Co. v. Koala Corp., 270 F. Supp. 2d 407, 415 (S.D.N.Y. 2003) (quoting Funai Electric Co., Ltd. v. Orion Electric Co., Ltd. (S.D.N.Y. Aug. 7, 2002) Nos. 01 Civ. 3501(AGS)(JCF) and 02 Civ. 2605(AGS)(JCF), 2002 WL 1808419, at *11). However, "district courts are not required to follow any particular procedure in conducting claim construction; while 'some courts have found it useful to hold hearings . . . [s]uch a procedure is not always necessary." J.G. Peta, Inc. v. Club Protector, Inc., 65 F. App'x 724, 727 n.2 (Fed. Cir. 2003) (alteration in original) (quoting Ballard Med. Prods. v. Allegiance Healthcare Corp., 268 F.3d 1352, 1358 (Fed. Cir. 2001)); see also CIAS, Inc. v. All. Gaming Corp., 424 F. Supp. 2d 678, 682 (S.D.N.Y. 2006) aff'd, 504 F.3d 1356 (Fed. Cir. 2007) ("A court may, but need not, conduct a Markman hearing to determine the scope of the claims."); Radiancy, Inc. v. Viatek Consumer Products Grp., Inc., No. 13-CV-3767 (NSR)(LMS), 2015 WL 221063, at *1 (S.D.N.Y. Jan. 14, 2015) ("A Markman hearing is unnecessary, for example, if the Court is able to determine the scope of the claims based on intrinsic evidence, dictionaries, and expert reports."); Revlon Consumer Products Corp. v. Estee Lauder Companies, Inc., No. 00-CV-5960 (RMB)(AJP), 2003 WL 21751833, at *14-15 (S.D.N.Y. July 30, 2003) ("A 'Markman hearing' to interpret the claim language is unnecessary in this case, because the sole disputed claim term—'completely coated'—is neither ambiguous nor highly technical. . . . Here, the Court is able to interpret the claim language based on intrinsic evidence and dictionaries, and has 'heard' expert testimony via written submissions. There is no need for a Markman hearing."); Safe-Strap Co., 270 F. Supp. 2d at 415 ("Courts can also interpret the claims on a paper record. . . . In other words, where the parties do

Int'l, 134 S. Ct. 2347 (2014), the parties filed letters addressing the decision's impact on this matter. On July 7, 2014, EasyWeb filed a letter informing the Court of a recent decision by the Federal Circuit that relates to Twitter's argument that the Court should exclude the testimony of EasyWeb's damages expert and enter judgment for Twitter based on an alleged failure to establish damages. The parties also have submitted letters addressing decisions by lower courts after *Alice*. The matter is fully submitted.

II. CLAIM CONSTRUCTION

The meaning and scope of asserted patent claims is a question of law and precedes the infringement and invalidity analyses. *SIBIA Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1355 (Fed. Cir. 2000); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc) (citation omitted). The '030 and '606 Patents claims are written in means-plus-function form; the '247 and '372 Patents claims are written as system claims; and the '658 Patent claims are written as method claims. The specifications are almost identical. The Court construes the dispositive disputed claims below, considering the point of view of a person of ordinary skill in the art as of March 11, 1999: an individual with "at least 5–6 years of technical work experience with software and hardware systems in the field of computer systems and networking, or something equivalent thereto." (Polish Validity Report ¶ 40, Novikov MSJ Decl. Ex. 33.)

A. Legal Standard

Claim construction is "exclusively within the province of the court." *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). Such construction "begins and ends" with the claim language itself, *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998), but the court may consult extrinsic evidence "if needed to assist in determining the meaning or scope of technical terms in the claims," *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1216 (Fed. Cir. 1995); *see Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (explaining that the court may rely on extrinsic evidence, including expert and inventor testimony, dictionaries, and learned treaties).

In construing the claim language, the court must begin with the principle that "the words of a claim 'are generally given their ordinary and customary meaning." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics*, 90 F.3d at 1582)). This ordinary and customary meaning "is the meaning that the [claim] term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313. "[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.*

not dispute any relevant facts regarding the accused product but disagree over the meaning of a particular claim, claim construction is amenable to summary judgment." (citations omitted)); *Wi-Lan, Inc. v. LG Elecs., Inc.,* No. 10-CV-432 (LAK)(AJP), 2011 WL 3279075, at *18 (S.D.N.Y. Aug. 2, 2011), report and recommendation adopted as modified, No. 10-CV-432 (LAK) (AJP), 2012 WL 760148 (S.D.N.Y. Mar. 7, 2012) *aff'd*, 493 F. App'x 103 (Fed. Cir. 2012) ("Here, the Court is able to determine the scope of the claims based on the intrinsic evidence and has 'heard' expert testimony via written submissions. A *Markman* hearing therefore is not necessary.")

"In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314. "In such circumstances general purpose dictionaries may be helpful." *Id.* In other cases, "determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art." *Id.* In those cases, "the court looks to those sources available to the public that show what a person of skill in the art would have understood the disputed claim language to mean." *Id.* (internal quotation marks and citation omitted). These sources include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Id.* (internal quotation marks and citation omitted).

When the specification reveals a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess, the inventor's lexicography governs. *Id.* at 1316. Nevertheless, it is improper to read limitations from the specification into the claim. *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1368 (Fed. Cir. 2005) ("'[I]f we once begin to include elements not mentioned in the claim, in order to limit such claim... we should never know where to stop." (alteration in original) (quoting *Phillips*, 415 F.3d at 1312)). Thus, the court "do[es] not import limitations into claims from examples or embodiments appearing only in a patent's written description, even when a specification describes very specific embodiments of the invention or even describes only a single embodiment, unless the specification makes clear that 'the patentee . . . intends for the claims and the embodiments in the specification to be strictly coextensive." *JVW Enters., Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1335 (Fed. Cir. 2005) (internal citations omitted).

B. Construction of the Disputed Terms

1. Non-Means-Plus-Function Terms

Claim 1 of the '247 Patent, which sets forth most of the standard claim terms at issue, recites:

A message publishing system (MPS) operative to process a **message** from a sender in a **first format**, comprising:

a central processor;

at least one sender account;

at least one storage area configured to store at least a first portion of the message;

and software executing in the central processor to configure the processor so as to:

identify the sender of the message as an authorized sender based on information associated with the message in comparison to data in the sender account, wherein the identification is dependent upon the first format;

convert at least a second portion of the message from the first format to a **second format**;

and publish the converted second portion of the message so as to be viewable in the second format only if the sender has been identified as an authorized sender.

('247 Patent at 43:47–64 (emphasis added).)

a. Stipulated Constructions

The parties have stipulated to the constructions of "message" and "security scheme"/"identification"/"identifying step is dependent upon the [first] format [of the message]." The patents' claims and specifications support the agreed-upon constructions. Accordingly, the Court construes "message" as "information, data, or content the sender wishes to publish on the Internet"; and "security scheme"/"identification"/"identifying step is dependent upon the [first] format [of the message]" as "the identification or security scheme applied is selected from a plurality of identification or security schemes based on the [first] format of the message." Thus, for example, "wherein the identification is dependent upon the first format" in the '247 Patent reads: "wherein the identification or security scheme applied is selected from a plurality of identification or security scheme applied is selected from a plurality of identification or security schemes based on the first format of the information, data, or content that the sender wishes to publish on the Internet."

b. "format"/"format of said message" ('030 Patent Claims 1, 17; '606 Patent Claims 1, 18; '247 Patent Claim 1; '658 Patent Claim 1; '372 Patent Claim 1)

EasyWeb's Proposed Construction	Twitter's Proposed Construction
message encoding	message encoding that determines how the
	message is reviewed

Every asserted independent claim recites that the identification (or security scheme) depends on the "format" of the "message" (the "information, data, or content that the sender wishes to publish on the Internet"). (E.g., '030 Patent at 45:17-18; '372 Patent at 43:47-59.) The construction of "format" is at the heart of the parties' dispute. They agree that "format" is "message encoding," but they dispute the scope of "message encoding." According to Twitter, "format" should be construed as "message encoding that determines how the message is reviewed." (Twitter Markman Brief, at 7–8 (explaining that a PDF file and a DOC file are in different formats because the former is encoded in a way that requires a PDF reader to decode it, while the latter requires a word processor).) EasyWeb contends that "message encoding" includes the file format (e.g., text, ipeg, way, tif, gif, html) and the transmission protocol (e.g., HTTP), which itself includes the transport encoding and transmission headers-information that accompanies a message and identifies its sender, such as the source and destination. (EasyWeb Markman Brief, at 21-22; see EasyWeb Markman Reply, at 2 ("'[M]essage encoding' includes both how the message is transported (e.g., the protocol, transmission headers, transport encoding, etc.) and how the message is reviewed (e.g., the file format).").) Thus, according to EasyWeb, messages with the same content are in different "formats" if they are accompanied by different identification information, are transmitted through different mediums, or both. Applying the principles set forth by the Federal Circuit, the Court finds no support for EasyWeb's construction. Instead, EasyWeb is attempting

to rewrite the claims to cover Twitter's technology, which is impermissible.⁵ *See, e.g., Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 908 (Fed. Cir. 2005) (holding that construction was flawed because it read "substantially flatted" as "flat," ignoring qualifier "substantially" and thus excluding defendant's product from claims).

As a linguistic matter, the "format" is the characteristic of the message that dictates the identification or security scheme in the first instance. Nothing in the claims implies that the identification scheme depends, even in part, on the format of "the message and any accompanying information." (See, e.g., '030 Patent at 45:12-18 (reciting that the "means for identifying" the sender are "based on information associated with said message in comparison to data in the sender account," and "said security scheme is dependent upon the format of said message").) Nor does anything imply that the "format of the message" depends on the identification scheme or the non-"format" information. Notably, EasyWeb never explains how the data in a transmission header, such as the message's sender or recipient, constitutes encoding of data. It is implausible to conclude that otherwise identical messages that use the same transport encodings are in different "formats" simply because, for instance, the sender or recipient are distinct, especially because ID signals can be practically anything and can be sent at any time. (See id. at 14:9–17 ("Any information accompanying, associated, attached or within a message may be used by the system to identify the sender of a message as a valid user. Additionally, different ID info can be received by the MPS at different times.").) Limiting "format" to the "message encoding that determines how the message is reviewed" also would be consistent with the technical definition of "format" in the 1990s: "a specified arrangement of such things as characters, fields, and lines, usually used for displays, printouts, or files." (1993 IBM Dictionary of Computing, Novikov Decl. Ex. 38, at TWITTER041707.)

The specification supports Twitter's construction. For instance, it teaches that "[a]fter a message is received by the system, it is typically converted into a format compatible to the way it will be reviewed." (*Id.* at 25:53–55.) The sole passage to use the term "format of the message"

⁵ EasyWeb contends that Twitter impermissibly imports limitations from the specification into the claim term. As discussed *infra*, the Court disagrees. EasyWeb's position also demonstrates why the Court must define the scope of "message encoding." Defining "format" as "message encoding" alone removes no ambiguity in the claim terms, and the Court cannot defer to a jury's definition of "message encoding." *See Markman*, 517 U.S. at 372.

⁶ This makes intuitive sense. Different message "formats" may require different transmission protocols (*e.g.*, a telephone call cannot be sent via email), which could affect other information associated with the message. However, the user, not the system, chooses the "format" and message type in the first instance.

⁷ EasyWeb's reliance on Claim 4 of the '247 Patent is unpersuasive. Claim 4 recites the system of Claim 1, "wherein the information associated with the message that is used by the software to identify the sender is further dependent upon a protocol of the first network." ('247 Patent at 44:3–7.) That ID information may be "further dependent" on the network protocol does not mean that the "protocol of the first network" is an element of the "format." Further, that Claim 4 exists demonstrates that a message's "format" is distinct from the transmission protocol by which the message is sent. EasyWeb's construction would make Claim 4 superfluous. Even EasyWeb's expert, Dr. Nathaniel Polish ("Polish"), agrees that the transport encoding is not part of the message's "format." (See Polish Dep. at 101:22–102:15, Novikov MSJ Decl. Ex. 4 ("Q. Using that definition of transfer encoding [encoding as part of transporting data from one place to another], do you consider transfer encoding that is applied to a message to be part of a message's format? A. I think we covered something very close to that this morning where I think I was saying that the encodings that are done as part of transport and that are then undone on the other side, from the point of view that we are interested in in this analysis, that those don't come into the equation." (objection omitted)).)

states: "Additional information accompanying the message such as the header, packet data, data descriptors, and the actual format of the message can also be used to determine the type of message. For example, if an email attachment is named 'TEST.JPG', the attachment is a JPEG image file." (Id. at 17:48-53 (emphasis added).) This disassociates the other "additional information" from "the actual format of the message," indicating that the Court should not combine them when construing the claims. See Autogiro Co. of Am. v. United States, 384 F.2d 391, 397 (Ct. Cl. 1967) ("[W]ords must be used in the same way in both the claims and the specification."). In addition, the specification teaches that "[i]n a main aspect, the system allows a user to publish a message in its native format." ('030 Patent at 8:49-54 (emphasis added).) The transmission protocol is not mentioned. Repeatedly, in fact, the specification uses "format" to refer to encoding that determines how a message is reviewed—not the content of the message or its transmission protocol and headers. (See, e.g., id. at 17:39-53 (identifying a "format of the message" as a "JPEG image file"); id. at 16:6–8 (referring to "a paging format such as XIO/TAP that is recognized by the paging system"); id. at 19:45-49 ("Another audio option may include prompting the user to select whether the published audio message should be in a WAV format, a Real Audio format, or in both formats by creating two separate files of the same message."); id. at 25:60–64 ("Converting the message into a common format ensures that the message can be reviewed by a wide range of programs and devices. For example, it is preferred to convert each page of a fax message into a GIF compatible image file."); id. at 36:23–27 ("Further, instead of GIF, the facsimile messages may be converted into JPEG, JPEG 2000, BMP, PCX, PIF, PNG . . ., SVG . . ., HTML, ASP or any other suitable type of file format.").)

EasyWeb argues that Twitter's construction improperly limits "format" to preferred embodiments that use the term "file format." (EasyWeb Markman Brief, at 22–23.) Citing Claim 3 of the '247 Patent, which recites, "The MPS of claim 1, wherein the first format comprises the message type" ('247 Patent at 44:1–2), and a disclosure in the specification that "each message type (sound, image, text, etc.) has its own preferred conversion method and file format" (*id.* at 25:32–33), ⁸ EasyWeb contends that "while the specification may use 'format' as a shorthand for 'file format' in those paragraphs where it unambiguously discusses conversion of file formats, the claim term 'format' is broader than just 'file format."" (EasyWeb Markman Brief, at 23.)

The Court finds that the patents use "format" and "file format" interchangeably and never associate the transmission protocol with the message encoding. That the message "format" can comprise the message type does not that mean the "format" includes or is affected by the transport encoding or transmission headers. (*Accord* Twitter Markman Brief, at 4–5 (explaining that a fax machine stores data (a message) in the format dictated by an international standard called T.4, and then, the message is encoded into a transport format to be sent to the receiving machine, where it is again stored as an image in the T.4 format (citation omitted)); *see* Polish Dep. at 101:22–102:15 (stating that encodings done as part of transport "don't come into the equation").) Instead, it shows that each message type "has its own preferred conversion method and file format" ("247 Patent at 25:32–33) and that the "format" can determine the "type" irrespective of the additional information associated with the message. EasyWeb's construction also ascribes inconsistent meanings to "format" when it is used in the phrase "first format" compared to the phrase "second format."

⁸ Other dependent claims recite that the "first format" can comprise an email ('247 Patent at 46:48–49) and that the message can be a text message (*id.* at 44:28–29). It is unclear whether "text message" refers to an SMS.

Specifically, Claim 1 of the '030 Patent recites that the system comprises, *inter alia*, "means for converting said message from first format to second format." ('030 Patent at 45:19–20.) Dependent Claim 6 recites, "wherein message in said first format is in a non-webpage reviewable format and said converting means converts said non-webpage reviewable format into a webpage reviewable format." (*Id.* at 45:46–49.) Nothing suggests that the patents use "format" to mean one thing in the context of converting and publishing the message to the "second format," and something else in the context of identification or authentication of the sender while the message is in the "first format." EasyWeb renders everything but the file format irrelevant to the "second format." Therefore, the better construction is one that focuses on the format of what the user is interested in converting. (*Cf.* Polish Dep. at 15:7–12 ("[I]n the context of the EasyWeb patent, you're talking about something that receives messages in one format and they get converted to another format and then broadcast and it is the things that you would be interested in converting.").)

Accordingly, the Court construes "format" as "message encoding that determines how the message is reviewed." This comports with the term's ordinary meaning according to the customary understanding of a person of ordinary skill in the art who reads it in the context of the particular claim and the intrinsic record. *See Phillips*, 415 F.3d at 1313.

c. "first format" ('030 Patent Claims 1, 17; '606 Patent Claims 1, 8; '247 Patent Claim 1; '658 Patent Claim 1; '327 Patent Claim 1)

EasyWeb's Proposed Construction	Twitter's Proposed Construction
Option 1: no construction necessary; use ordinary meaning	a non-webpage-compatible format that is different from the format in which the message
ordinary meaning	is posted to the Internet
Option 2: a format that is different from a second format	

The asserted independent claims require that the MPS receive the message in a "first format." EasyWeb argues that no construction is necessary or that at most the Court should construe the term as "a format that is different from a second format," because construction would involve "little more than the application of the widely accepted meaning of [a] commonly understood" word. Phillips, 415 F.3d at 1314. Twitter counters that EasyWeb disregards the purpose of the invention, and that the claims and specification limit the "first format" to a "nonwebpage-compatible" format because "Codignotto did not invent simply posting things on the Internet." (Twitter Markman Brief, at 15.) EasyWeb responds that the invention is not limited to publishing messages received in a non-web-reviewable format, because its goal is "to allow virtually any person or organization to easily publish a message on the Internet that can be simultaneously reviewed by a mass number of people from around the world." ('030 Patent at 4:36-39.) EasyWeb also asserts that Twitter's construction violates the doctrine of claim differentiation because, while Claim 1 of the '247 Patent requires that the message be in a "first format," Dependent Claim 24 adds the further limitation "wherein [the] message in the first format is in a non-web page reviewable format and the message in the second format is a web page reviewable format" ('247 Patent at 45:6–8). Thus, according to EasyWeb, the "presence of [that] dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." Phillips, 415 F.3d at 1315.

Converting a message's format is integral to the system. The claims either require conversion or recite that the message is received in a "first format," necessarily implying there will be a second. The parties also agree that the "second format" must be webpage reviewable and different from the "first format." Therefore, construction is necessary because it is important to accurately distinguish between the two formats, and "first format" is ambiguous. Here, the claims and specification indicate that Codignotto contemplated the existence of a mixed-format message in the first instance, but they belie the possibility that a message is covered by the patents-in-suit where it is wholly webpage-compatible in the "first format." Thus, although "the interpretative process may not import limitations from the specification into the defining language of the claims," *Leggett & Platt, Inc. v. Hickory Springs Mfg. Co.*, 285 F.3d 1353, 1357 (Fed. Cir. 2002), the claims and "the specification manifest[] a clear intent to limit the term by using it in a manner consistent with only a single meaning," *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1254 (Fed. Cir. 2011).

The asserted independent claims do not limit the "first format" to a non-webpage-reviewable format, and Claim 24 of the '247 Patent implies that the "first format" is broader than Twitter's proposal, Twitter's claim differentiation counterargument notwithstanding. ¹⁰

Claim 1 of the '247 Patent recites in part that the central processor should be able to "convert at least a second portion of the message from the first format to a second format; and publish the converted second portion of the message so as to be viewable in the second format." ('247 Patent at 43:60–63.) The specification teaches that "[e]ven if a portion of a message doesn't undergo a conversion, the message in its entirety has." (*Id.* at 33:17–18.) It continues:

For example, let's say a user attaches a GIF [webpage-compatible] image that they wish to publish to an email message. When the system publishes the email message, it may simply just create a webpage to host the attached image and not convert the image file at all. However, even though the image file was not converted, the overall message was converted from an email compatible format into a webpage

⁹ There appears to be no material difference between "webpage compatible" and "webpage reviewable." In addition, the second portion of Claim 24 of the '247 Patent is redundant regardless of the Court's construction.

¹⁰ As the Federal Circuit explained in *InterDigital Communications, LLC v. International Trade Commission*, 690 F.3d 1318 (Fed. Cir. 2012), "[t]he doctrine of claim differentiation is at its strongest in this type of case, 'where the limitation that is sought to be "read into" an independent claim already appears in a dependent claim."" Id. at 1324 (quoting Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed. Cir. 2004)) (citing Wenger Mfg., Inc. v. Coating Mach. Sys., Inc., 239 F.3d 1225, 1233 (Fed. Cir. 2001) ("Claim differentiation . . . is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims,")). Although the doctrine is "a guide, not a rigid rule," especially with respect to independent claims, Curtiss-Wright Flow Control Corp. v. Velan, Inc., 438 F.3d 1374, 1381 (Fed. Cir. 2006), the Federal Circuit has not foreclosed the possibility that the presumption can be overcome in situations involving independent and dependent claims. See InterDigital, 690 F.3d at 1324 (rejecting argument that presumption was overcome without foreclosing possibility that it could be overcome in situation involving independent and dependent claim); Nystrom v. TREX Co., 424 F.3d 1136, 1144-45 (Fed. Cir. 2005) (A patentee is "not entitled to a claim construction divorced from the context of the written description and prosecution history."). Twitter puts forth a persuasive argument, but aspects of the patents-in-suit indicate that the presumption should not be overcome in this case. The Court's construction adequately addresses Twitter's concerns while remaining faithful to the claims and specifications.

compatible format."

(*Id.* at 33:18–25.) EasyWeb does not explain why conversion would be necessary if the message is webpage reviewable in its entirety in the first instance. Why use the system in that case? In such a situation, the "essence" of the invention—to allow "virtually anyone to automatically create a new website . . . using just a telephone or fax machine" by converting the message into a format that could be published on the Internet (*id.* at 44:62–64)—falls away. Conversion to a wholly webpage-compatible format thus is essential to the invention and must be reflected in the claim construction, because Codignotto wanted to obviate the need for web publishing software and specific technical knowledge to publish a message on the Internet. (*See id.* at 4:35–37.) To construe "first format" without considering this purpose would ignore the purported advantages of the claimed invention and sweep within its scope the problems it was intended to solve. *See LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1343–44 (Fed. Cir. 2005) ("While it is true that not every advantage of the invention must appear in every claim, it would be peculiar for the claims to cover prior art that suffers from precisely the same problems that the specification focuses on solving." (internal citation omitted)).

Therefore, although nothing justifies construing "first format" to include a message that is wholly reviewable on the Internet before it even interacts with the invented system, the patents contemplate that a message can have webpage-compatible aspects in the "first format." Accordingly, the Court construes "first format" as "a format that is not webpage-compatible at least in part and that is different from the format in which the message is posted to the Internet."

d. "second format"

EasyWeb's Proposed Construction	Twitter's Proposed Construction
a format reviewable on the Internet that is	a webpage-compatible format that is different
different from the first format	from the first format

The parties agree that "second format" should be construed in relation to "first format." Accordingly, for consistency with the construction of "first format," the Court construes "second format" as "a format that is wholly webpage-compatible and different from the first format."

e. "central processor" ('606 Patent Claim 18; '247 Patent Claim 1; '658 Patent Claim 1; '372 Patent Claim 1)

EasyWeb's Proposed Construction	Twitter's Proposed Construction ¹²
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¹¹ Codignotto even testified that systems where "you entered information, you post on a web page and you viewed [the information] on a webpage" are "the same format" and outside the scope of his invention, because his "invention allowed for submitting various different formats that converted to a web page or something else. Keeping it the same wasn't new." (Codignotto Dep. at 188:6–18.)

¹² In its letter addressing the impact of the Supreme Court's decision in *Alice*, Twitter states that "[i]n the interest of resolving this case cleanly, Twitter hereby stipulates to EasyWeb's construction of the key term 'central processor,' rendering the asserted claims unpatentable." (Twitter July 3 Post-*Alice* Letter, at 3.) The Court rejects this stipulation because, as set forth *infra*, the language in the patents-in-suit does not support EasyWeb's construction. In any event, even the Court adopted EasyWeb's construction of "central processor," the Court still would grant summary judgment

Option 1: no construction necessary; use	a computer or set of computers where each
ordinary meaning	computer performs all the functions necessary
	for the MPS to process a message
Option 2: one or more computers as part of a	
system	

The asserted independent claims of the '247, '658, and '372 Patents explicitly require a "central processor" to perform specific functions. The parties agree that certain means-plus-function claims in the '606 and '030 Patents also require a "central processor." EasyWeb argues that no construction is necessary or that the Court should construe "central processor" as "one or more computers as part of a system." Twitter insists that the "central processor" limitation must be structural. The Court concludes that "central processor" must be construed because its ordinary meaning may not be obvious to a layperson. Nothing in the patents, however, justifies EasyWeb's broad construction, which would divorce the meaning of "central processor" from its structure and capabilities. Twitter's proposal, meanwhile, is too vague.

The "central processor" depicted in Figure 13 of the '247 Patent is a single unit connected to an "input/output" device and a single "Internet server." ('247 Patent at Fig. 13.) The specification discloses that "the central processor may comprise a number of computers or, more precisely, a number of microprocessors with each microprocessor handling a certain number of simultaneous incoming messages or requests." (Id. at 38:26-31.) Therefore, the "central processor" is hardware—a computer or set of computers. It also must have certain capabilities. For example, the system in the '247 Patent requires "software executing in the central processor to configure the processor so as to:" identify the sender of the message, convert at least a portion of the message from the first format to a second format, and publish the converted second portion of the message. (Id. at 43:53–64.) Claims 14 and 15 add the further limitations, "wherein the software configures the processor to publish the converted portion of the message so as to be accessible through the Internet at a particular URL or at a particular URL plus one or more paths," or "to be part of a web page accessible through the Internet at a URL that is associated with the sender's storage area." (Id. at 44:38-45.) The '247 Patent, therefore, contemplates that the "central processor" is capable of and used for performing all the functions necessary for the MPS to receive the message, identify the sender, and convert and publish the message.

Other patents-in-suit require less of the MPS. Claim 18 of the '606 Patent recites in part, "a central processor, wherein at least one of said means utilizes the central processor to perform its recited function." ('606 Patent at 46:28–30.) The said means are to receive a message, identify the sender, convert the message, and provide at least a portion of the message to at least one third party storage area. (*Id.* at 46:12–27.) The parties agree that the '030 Patent requires the central processor to at least receive the message, identify the sender, and send a user's published messages to a third party's web server. (*See* Twitter Markman Reply Appendix A.) The '658 Patent requires the central processor to at least receive the message and identify the sender. ('658 Patent at 43:57–62.) The '372 Patent requires the central processor to identify the sender and publish the portion

to Twitter on the infringement claim, and summary judgment to EasyWeb on the anticipation, obviousness, written description, and enablement invalidity defenses for the reasons set forth *infra*.

of the message so as to be viewable. ('372 Patent at 43:53–62.) Thus, "the functions necessary for the MPS to process a message" vary from patent to patent.¹³

Nevertheless, it strains logic and the language of the patents to conclude that a computer is part of the "central processor" if it performs at least one function required of the "central processor" to process a given message, while another computer performs another function. (Under EasyWeb's construction, if one claim requires a central processor to perform steps A and B, the central processor for purposes of that claim is the group of computers that perform steps A and B, even if only one set performs step A.) The specification never disclaims a distributed server architecture in which the several computers comprising a "central processor" each perform only a subset of the functions required by the claims. However, the specification explains that the number of computers within the "central processor" depends upon the desired capacity for the MPS. ('247 Patent at 37:52-59.) Thus, the central processor may comprise a number of computers when there are a large number of users and/or simultaneous requests. (*Id.* at 37:59–61.) In that case, the input/output device may route the incoming messages to an available computer in the processor. (Id. at 37:61– 63.) Therefore, the purpose of having several computers is to assist in handling the demand for message-processing capacity, not to distribute the handling of each individual function to one computer or another. (See id. at 38:26–30 ("[T]he central processor may comprise a number of . . . microprocessors with each microprocessor handling a certain number of simultaneous incoming messages or requests."). If that were not so, then the term "central" would be superfluous; the qualifier could be removed and the claims would still require a computer system that performs the recited functions. ¹⁴ See Bicon, Inc. v. Straumann Co., 441 F.3d 945, 950 (Fed. Cir. 2006) ("Allowing a patentee to argue that physical structures and characteristics specifically described in a claim are merely superfluous would render the scope of the patent ambiguous, leaving examiners and the public to guess about which claim language the drafter deems necessary to his claimed invention and which language is merely superfluous, nonlimiting elaboration. For that reason, claims are interpreted with an eye toward giving effect to all terms in the claim."). The claim construction must reflect these structural principles.

Accordingly, the Court construes "central processor" as "a computer or set of computers, where one computer performs all the functions assigned to the central processor that are necessary for the MPS to process a given message." As explained *supra*, those assigned functions vary from patent to patent, and two processors cannot handle the same message.

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¹³ The specification confirms that each computer in the "central processor" must only be capable of and used for performing the functions required of the central processor in the claims. For instance, the specification explains that "[t]he central processor uses the various ID signals to identify the user sending the message and store the message in the appropriate storage area." ('247 Patent at 38:24–26.) It also discloses that an Internet server connected to the "central processor" can perform several of the MPS's claimed functions, such as retrieving unconverted messages stored by the central computer and converting them into the webpages. (*Id.* at 38:44–54; *see id.* at 34:58–35:12 (explaining that a message may stay in an unpublished or even unconverted format from the time it is received by the system to when it reaches the requesters' computer or reviewing device, and software on that device would then perform the publishing and/or conversion); *id.* at 40:23–25 ("[T]he MPS has been described as having the central processor for processing messages and the Internet Server 1360 for handling requests.").)

¹⁴ Dr. Polish testified that, under EasyWeb's construction, it would be impossible to design a system in which any of the functions required by the claims were not performed by a "central processor." (Polish Dep. at 126–27.)

2. Means-Plus-Function Terms in the '030 and '606 Patents

The Court next construes the means-plus-function terms in the '030 and '606 Patents. The parties do not dispute the functions of the claims, only the structures.

a. Principles for Construction of Means-Plus-Function Limitations

35 U.S.C. § 112(f), formerly ¶ 6, governs means-plus-function limitations. "A means-plusfunction limitation recites a function to be performed rather than definite structure or materials for performing that function." Lockheed Martin Corp. v. Space Sys./Loral, Inc., 324 F.3d 1308, 1318 (Fed. Cir. 2003). "In exchange for using this form of claiming, the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly link that structure to the function." Triton Tech. of Texas, LLC v. Nintendo of Am., Inc., 753 F.3d 1375, 1378 (Fed. Cir. 2014) (citing Ibormeith IP, LLC v. Mercedes-Benz USA, LLC, 732 F.3d 1376, 1379 (Fed. Cir. 2013)); see also Function Media, L.L.C. v. Google, Inc., 708 F.3d 1310, 1317 (Fed. Cir. 2013) ("The trade-off for allowing such claiming is that 'the specification must contain sufficient descriptive text by which a person of skill in the field of the invention would know and understand what structure corresponds to the means limitation." (quoting Typhoon Touch Tech., Inc. v. Dell, Inc., 659 F.3d 1376, 1383–84 (Fed. Cir. 2011))). "Such a limitation must be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." Lockheed Martin, 324 F.3d at 1318 (citing 35 U.S.C. § 112, ¶ 6). This rule "confines the breadth of protection otherwise permitted by purely functional claiming." Noah Sys., Inc. v. Intuit, Inc., 675 F.3d 1302, 1318 (Fed. Cir. 2012) (internal quotation marks and citation omitted); see Blackboard, Inc. v. Desire2Learn, Inc., 574 F.3d 1371, 1385 (Fed. Cir. 2009) ("That ordinarily skilled artisans could carry out the recited function in a variety of ways is precisely why claims written in 'means-plus-function' form must disclose the particular structure that is used to perform the recited function.").

To construe a means-plus-function limitation, the court must first identify and construe the claimed function, and then identify the corresponding structure that performs that function. Lockheed Martin, 324 F.3d at 1318–20. The function of a means-plus-function claim must be construed to include the limitations contained in the claim language. Id. at 1319. "In identifying the function of a means-plus-function claim, a claimed function may not be improperly narrowed or limited beyond the scope of the claim language." Id. At the same time, however, "neither may the function be improperly broadened by ignoring the clear limitations contained in the claim language." Id. The court should use ordinary principles of claim construction to construe the meaning of the words used to describe the claimed function. Id.

In identifying the structure of a means-plus-function limitation, claim elements are construed to cover (1) the structure or material disclosed in the patent's specification that perform the claimed function and (2) equivalents of that disclosed structure or material. See, e.g., Versa Corp. v. Ag–Bag Int'l Ltd., 392 F.3d 1325, 1329 (Fed. Cir. 2004). Thus, the court may construe the claim limitation to "encompass only the disclosed structure and its equivalents." Biodex Corp. v. Loredan Biomedical, Inc., 946 F.2d 850, 863 (Fed. Cir. 1991). On the other hand, the "court may not import into the claim features that are unnecessary to perform the claimed function." Northrop Grumman Corp. v. Intel Corp., 325 F.3d 1346, 1352 (Fed. Cir. 2003). "When multiple embodiments in the specification correspond to the claimed function, proper application of § 112,

¶ 6 generally reads the claim element to embrace each of those embodiments." *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999). In addition, multiple claimed functions can share the same corresponding structure or structures. *Intellectual Prop. Dev., Inc. v. UA–Columbia Cablevision of Westchester, Inc.*, 336 F.3d 1308, 1320 n.9 (Fed. Cir. 2003). Structural equivalence is met "only if the differences are insubstantial; that is, if the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification." *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999) (internal citation omitted).

b. Exemplary Language and General-Purpose Computers

Two fundamental shortcomings recur in EasyWeb's proposed constructions.

First, EasyWeb repeatedly uses non-limiting language in its proposed constructions (e.g., "software, such as . . .") because it believes the identified structures are "exemplary." Means-plusfunction claims are limited to the particular structures the specification describes as performing the recited function (and their statutory equivalents), even if a person of ordinary skill in the art would know what other structures could be employed to perform the function. E.g., Ergo Licensing, LLC v. CareFusion 303, Inc., 673 F.3d 1361, 1364 (Fed. Cir. 2012) ("Under § 112 ¶ 6, a patentee is only entitled to 'corresponding structure . . . described in the specification and equivalents thereof,' not any device capable of performing the function." (quoting 35 U.S.C. § 112 ¶ 6); see Med. Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1211–12 (Fed. Cir. 2003) (reversing denial of JMOL of noninfringement after ruling that district court erred in including software as corresponding structure for "converting means" limitation, even though one of skill in the art would know how to use the software to perform the function); Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1382 (Fed. Cir. 1999) (explaining that the knowledge of one of skill in the art may be used to "understand what structure(s) the specification discloses," not to fill in gaps in the disclosure). For instance, "[i]f a patentee chooses to disclose a single embodiment, then any means-plus-function claim limitation will be limited to the single disclosed structure and equivalents thereof." Metter-Toledo, Inc. v. B-Tek Scales, Inc., 671 F.3d 1291, 1296 (Fed. Cir. 2012); see, e.g., Nomos Corp. v. Brainlab USA, Inc., 357 F.3d 1364, 1368 (Fed. Cir. 2004) ("The patent states 'that the means for generating the ultrasound image may be an ultrasound probe, *including* a means for mounting the ultrasound probe to a radiation therapy device.' This language indicates that the invention envisioned and claimed by the applicant included a fixation device that secures the probe to the treatment table. This is the only embodiment of the invention described in the '026 patent. As a result, the corresponding structure is limited to that embodiment, which includes a fixation device, and its equivalents." (internal citation omitted)). Thus, EasyWeb's constructions are not saved by its identification of open-ended structures that "include" but are not limited to the patents' disclosures. Therefore, unless justified by the specification, the Court disregards any exemplary language in EasyWeb's proposed constructions.

Second, EasyWeb's structures frequently recite a general-purpose computer or software, without describing "how the computer [or software] performs the claimed function." *Blackboard*, 574 F.3d at 1384; *see Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340–41 (Fed. Cir. 2008) ("Simply reciting 'software' without providing some detail about the means to accomplish

the function is not enough" to make claims definite.). Where there is a "special purpose computerimplemented means-plus-function limitation," the structure disclosed in the specification must be "more than simply a general purpose computer or microprocessor." Noah Sys., 675 F.3d at 1312 (quoting Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1333 (Fed. Cir. 2008)). The specification must "disclose an algorithm for performing the claimed function." *Id.* (quoting Net MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1367 (Fed. Cir. 2008)); see Triton Tech, 753 F.3d at 1378 ("If the function is performed by a general purpose computer or microprocessor, then the specification must also disclose the algorithm that the computer performs to accomplish that function."); Aristocrat, 521 F.3d at 1333 (stating that where the disclosed structure is a computer programmed to carry out an algorithm, the disclosed structure is "the special purpose computer programmed to perform the disclosed algorithm" (quoting WMS Gaming, Inc. v. Int'l Game Tech., 184 F.3d 1339, 1349 (Fed. Cir. 1999))). The specification can express the algorithm—"a fixed step-by-step procedure accomplishing a given result," Typhoon Touch, 659 F.3d at 1385 (citation and internal quotation marks omitted)—"in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." Finisar, 523 F.3d at 1340 (internal citation omitted). Simply reciting software, however, "without providing some detail about the means to accomplish the function," is insufficient. 523 F.3d at 1340-41 (citation omitted). Failure to disclose an adequate structure for a computer-implemented means-plus-function term renders the claim indefinite. See, e.g., Noah Sys., 675 F.3d at 1311–12, 1318–19.

EasyWeb relies on a narrow exception to the algorithm requirement for computer-implemented means-plus-function limitations: when the claimed function can be accomplished by "merely plugging in a general-purpose computer" and does not require special programming. *Ergo Licensing*, 673 F.3d at 1365 ("It is only in the rare circumstances where any general-purpose computer without special programming can perform the function that the cited algorithm need not be disclosed."). In *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303 (Fed. Cir. 2011), the Federal Circuit, focusing on the functions of "processing," "receiving," and "storing" data, held that it is "not necessary to disclose more structure than the general purpose processor" if the function in question "can be achieved by any general-purpose computer without special programming." *Id.* at 1316. In contrast, claims reciting a "processing means . . . for receiving customer number data entered by a caller and for storing the customer number data . . . and based on a condition coupling an incoming call to the operator terminal, the processing means visually displaying the customer number data" were indefinite because no algorithm was disclosed that informed the public "as to the way Katz's invention conditionally couples calls." *Id.* at 1315.

EasyWeb's reliance on *Katz* is unpersuasive. EasyWeb incorrectly assumes that the Court has adopted EasyWeb's construction of "central processor." The Court's construction, on the other hand, recognizes that the functions performed by the central processor are interconnected, weighing against a conclusion that they can be performed by "merely plugging in a general-purpose computer." *Ergo Licensing*, 673 F.3d at 1365. Moreover, as discussed *infra*, the specification describes functions that cannot be accomplished without a computer with special programming, such as receiving messages from a fax or telephone call. *Katz* does not give EasyWeb license to ignore the structure that the specification actually discloses in its claim constructions. *See WMS Gaming*, 184 F.3d at 1348 ("The structure of a microprocessor programmed to carry out an algorithm is limited by the disclosed algorithm.").

c. "means for receiving a message over a network from a sender of said message" ('030 Patent Claims 1, 7; '606 Patent Claims 1, 18)

EasyWeb's Proposed Construction	Twitter's Proposed Construction
Structure: a central processor connected to the	Structure 1: (1) a central processor connected
Internet or the public switched telephone	to a network that identifies a user and receives
network	and stores messages for that user, where the
	messages are received over the network
	directly from a sender, rather than from an
	intermediary, and where the messages are
	received via fax and telephone call over a
	public switched telephone network or via
	email over the Internet; and (2) an
	input/output device that routes data back and
	forth between an open port of the central
	processor and either the telephone network or
	the Internet.
	Structure 2: a central processor that receives
	messages via fax, phone call, email, or the
	Internet Printing Protocol

The claimed function is "to receive a message over a network from a sender of said message." The parties dispute whether the corresponding structure must include how the message is received. EasyWeb, relying on *Katz*, argues that a general-purpose computer can perform the recited function. Twitter counters that the structure must include how the message is received because the specification only discloses receiving messages via email, fax, telephone call, and the Internet Printing Protocol ("IPP").

In the abstract, EasyWeb's construction is correct. The specification provides that the central processor receives the incoming message over the network ('030 Patent at 5:46-51), and, as drafted, the claimed "receiving" function is a basic function of a general-purpose processor. See Katz, 639 F.3d at 1316. The problem is that the specification only teaches receiving messages via fax, telephone call, email, or the IPP. (See '030 Patent at 39:4–30.) Nothing suggests that receiving messages from the non-email sources is coextensive with the structure of a general-purpose computer. Compare Asentinel LLC v. Cass Info. Sys., Inc., 10-2706-ML/P, 2012 WL 1097337, at *12-14 (W.D. Tenn. Feb. 17, 2012) report and recommendation adopted, No. 2:10-CV-02706-JPM, 2012 WL 1097336 (W.D. Tenn. Mar. 30, 2012) (reasoning that claim element reciting "means for importing telecommunications invoices," where function was construed as "to receive (as in data)," required disclosure of specific algorithm explaining "how the software performs the function of receiving data"), with e-LYNXX Corp. v. Innerworkings, Inc., 1:10-CV-2535, 2012 WL 4484921, at *19–20 (M.D. Pa. Sept. 27, 2012) aff'd sub nom. E-Lynxx Corpo. v. InnerWorkings, Inc., 592 F. App'x 947 (Fed. Cir. 2015) (concluding that "receiving" an electronic communication is a function that may be performed by any general purpose computer and required no specific algorithm, but functions related to the organization and association of vendors with buyers required the disclosure of an algorithm because vendor data could be organized according to myriad

criteria). Thus, despite the agreed-upon "receiving" function, this cannot be one of those "rare circumstances" in which the recited function requires nothing more than "plugging in a general-purpose computer." *Ergo*, 673 F.3d at 1364–65. This particularly is true because the enumerated transmission methods were critical to overcoming the perceived shortcomings of the prior art. *See Typhoon Touch*, 659 F.3d at 1385 ("[T]he amount of detail that must be included in the specification depends on the subject matter that is described and its role in the invention as a whole."); *Ibormeith IP, LLC v. Mercedes-Benz USA, LLC*, 889 F. Supp. 2d 677, 690–91 (D.N.J. 2012) *aff'd*, 732 F.3d 1376 (Fed. Cir. 2013) (reasoning that where the recited function is central to the claimed invention, "the algorithm corresponding to this function must be disclosed with significant detail").

Accordingly, the corresponding structure is "a central processor that receives messages via fax, telephone call, email, or the Internet Printing Protocol," which describes how the central processor is programmed to perform the receiving function.

d. "means for identifying said sender of said message as an authorized sender" ('030 Patent Claims 1, 17; '606 Patent Claims 1, 18)

EasyWeb's Proposed Construction

Structure: a central processor that uses identification ("ID") signals to identify a sender by doing a lookup for the account associated with the ID signal, such ID signals including: caller ID signal, fax terminal ID, DTMF ID tones, caller number ID signal describing the number that is being called, source or destination information from the packets of digital data sent over the Internet, data contained in IP packets, barcodes or other optically readable ID contained within a message itself, text within an email message or name of an attachment to an email message, time and date associated with a message, passcode and user account ID, digital signatures, or encryption

Twitter's Proposed Construction

Structure: a central processor that receives messages via fax, telephone call, email, or the Internet Printing Protocol (IPP), and that uses a caller ID signal, DTMF tones, the called number ID signal, email headers, or data in fax packets or IPP packets, or optical or speech recognition technology to identify a user.

The claimed function is "to identify said sender of said message as an authorized sender based on information associated with the message in comparison to the data in the sender account." EasyWeb argues that because "any general purpose processor can perform a lookup or comparison of the ID signals it receives to those it has stored, the linked structure for this function is properly a central processor that is able to process that information." (EasyWeb Markman Reply, at 17.) Twitter believes the corresponding structure must be more limited. The parties also disagree as to the specific ID signals disclosed in the specification.

EasyWeb's construction suffers from the aforementioned shortcomings. First, there is no evidence that a general-purpose computer can use ID signals to identify an authorized user without

special programming. The claimed function is more complex than the "processing" function in Katz. See 639 F.3d at 1315-17. Second, the Court must limit the claims to the structure identified in the specification, and equivalents. Noah Sys., 675 F.3d at 1318. The specification discloses algorithms for identifying senders of emails, faxes, telephone calls, and IPP print jobs, which underscores the need to clarify the source of the messages. These include caller ID signals ('030 Patent at 11:10-26), DTMF tones (id. at 11:40-45), the called number ID signal (id. at 11:58-12:16), barcodes or another optically readable ID in a message (id. at 12:52–55), email headers, text within an email or the name of an attachment to an email (id. at 12:61-62), fax terminal ID (id. at 14:21–24), digital signatures (id. at 32:48–50), speech recognition technology (id. at 12:62– 13:3), and a passcode and user account ID (id. at 13:58–60). EasyWeb, however, includes signals that the specification does not disclose, such as "data contained in IP packets" and "source and destination information from packets of data sent over the Internet." The portions of the specification EasyWeb relies on actually disclose using the source and destination information from the packets of data making up a fax or voice and video communication (id. at 12:17–40) and using data contained in IP packets of an IPP print job (id. at 12:48-50). In addition, encryption is used to secure a message, not identify a sender. (See id. at 32:48–50 ("[E]ncryption can be used so only the indented recipient can read the email message.").) In addition, the specification describes using cookies as a means to save a reviewer's preferences only, not as an ID signal. (Id. at 25:30– 52.)

Accordingly, the corresponding structure is "a central processor that, after receiving a message via tax, telephone call, email, or the Internet Printing Protocol (IPP), identifies the sender using a caller ID signal, DTMF tones, the called number ID signal, email headers, text within an email message or name of an attachment to an email message, fax terminal ID, digital signatures, data in fax packets or IPP packets, or optical or speech recognition technology."¹⁵

e. "means for converting said message from said first format to a second format" ('030 Patent Claims 1, 17; '606 Patent Claims 1, 18)

EasyWeb's	Proposed	Construction

Structure: a network server using software, such as virtual printer drivers, optical recognition programs, speech recognition technology, Active Server Pages and CGI, and fax-gateway devices, that converts fax, text, image, video, audio, or email information into webpage formats including Standard Generalized Mark-Up Language such as the HTML, XML, and DHTML.

Twitter's Proposed Construction

Structure: software running on the Internet server that converts fax, telephone call, email, or Internet Printing Protocol-transmitted messages from a non-webpage-reviewable format into a webpage-reviewable format by processing images, video, or audio contained in the message, and rendering the images, video or audio in a format publishable on a webpage by using optical character recognition, speech recognition, or audio, video, or image conversion software

¹⁵ This construction slightly modifies Twitter's proposal, but it includes the only message types whose senders the specification teaches how to identify. Any inadvertent omission by the Court of a particular identification algorithm is not material to the infringement and invalidity issues pending before the Court.

The claimed function is "to convert said message from said first format to a second format"; that the corresponding structure requires software; and that the software processes text, image, video, or audio. The parties dispute the construction of "first format," which must be "not webpage-compatible at least in part." The parties also dispute what algorithms are disclosed for converting to the second format, and whether the software should be limited to those algorithms. First, EasyWeb's "exemplary" claiming of conversion methods is improper. *See, e.g., Noah Sys.*, 675 F.3d at 1318. Second, EasyWeb, citing *Medical Instrumentation*, argues that the proper linked structure is "software running on the network server" because "the types of formats are not structures to be limited based on § 112 ¶ 6" because "one of ordinary skill in the art would know what programs to use to convert the message format from fax, text, image, video, audio, or email messages into webpage formats." (EasyWeb Markman Brief, at 14.) The Court disagrees.

In Medical Instrumentation and Diagnostics Corporation v. Elekta AB, the alleged infringer argued that the district court improperly included software for digital-to-digital conversion as corresponding structure for the claimed "converting means." Medical Instrumentation's expert never pointed to any disclosure of structure for digital-to-digital conversion in the specification; he explained that such conversion was not disclosed or discussed in the specification presumably because it was well-known in the art and required no explanation. 344 F.3d 1205, 1212 (Fed. Cir. 2003). The Federal Circuit held that the district court erred in identifying software as a corresponding structure, because "[t]here is nothing in the specification or prosecution history that clearly links or associates software with the function of converting images into a selected format." Id. at 1211. The court emphasized that the "correct inquiry is to look at the disclosure of the patent and determine if one of skill in the art would have understood that disclosure to encompass software for digital-to-digital conversion and been able to implement such a program, not simply whether one of skill in the art would have been able to write such a software program. "Id. at 1212 (citations omitted); see also id. at 1313-14 ("[W]e have been generous in finding something to be a corresponding structure when the specification contained a generic reference to structure that would be known to those in the art and that structure was clearly associated with performance of the claimed function.").

Relatedly, in Biomedino, LLC v. Waters Technologies Corp., the Federal Circuit considered whether a means-plus-function claim involving control means for operating valves disclosed sufficient structure when the specification stated that this function could be performed using known methods and equipment. 490 F.3d 946, 950–51 (Fed. Cir. 2007). The patentee argued that prior art established specific ways to operate the valves, and that a person skilled in the art would identify these prior art structures by way of the "known methods" reference. Id. at 951. The Federal Circuit disagreed, finding that the reference to "known methods" cannot satisfy the meansplus-function requirement that there be "corresponding structure . . . described in the specification." Id. at 953 (quoting 35 U.S.C. § 112, ¶ 6). The court distinguished Atmel, where it held that a structure was sufficiently disclosed when the specification referenced "known . . . techniques" for accomplishing a certain function and then immediately referenced an article that, according to an expert, indicated to persons skilled in the art "the precise structure of the means recited in the specification." Id. at 952 (citing Atmel, 198 F.3d at 1382). The Biomedino court noted the "significant difference" between a patent specification that expressly included an article describing a structure for accomplishing the known technique and a patent specification that merely referenced that "known techniques or methods can be used." *Id.* at 952–53.

Therefore, *Biomedino* and *Medical Instrumentation* simply teach that the corresponding structure of a means-plus-function limitation must be adequately disclosed in the specification in order for the claim to not be indefinite. The disclosure can be supported by expert testimony, and the specification is interpreted as read by one of skill in the art. *Accord Function Media*, 708 F.3d at 1318–19 (affirming judgment of indefiniteness for claim reciting a "means for transmitting" where the parties agreed that the means software, but the specification never explained how the specific software performs the transmission function, and rejecting any reliance on knowledge of one of skill in the art "to fill in the gaps"); *DE Techs., Inc. v. Dell, Inc.*, 428 F. Supp. 2d 512, 520 n.4 (W.D. Va. 2006) ("*Medical Instrumentation*, in combination with *Harris*, requires that 'software' must at least be identified as software known to those of skill in the art in the specification." (internal quotation marks and citations omitted)). Twitter does not contend that the specification here does not at least suggest that software programs known to those of skill in the art can perform the first-to-second format conversion.

Nevertheless, that the means-plus-function claims may not be indefinite does not mean their structure can still be boundless. The Federal Circuit has not held that the knowledge of one of skill in the art excuses a court from construing a corresponding structure to encompass only the disclosed structure and its equivalents. Cf. SuperGuide Corp. v. DirecTV Enters., Inc., 358 F.3d 870, 878 (Fed. Cir. 2004) ("Method and apparatus claims not written in means-plus-function format are not necessarily limited to that disclosed in the specification but rather are defined by the language of the claims themselves."); Alitiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1376 (Fed. Cir. 2003) ("[M]erely pointing out that the relevant structure is software rather than hardware is insufficient. As stated above, because 'commands' (i.e., software) is so broad as to give little indication of the particular structure used here and is described only functionally, one must still look to the specification for an adequate understanding of the structure of that software."); WMS Gaming, 184 F.3d at 1348–49 (overruling district court's finding that corresponding structure disclosed in specification was an "algorithm executed by a computer" and finding that the structure disclosed for the "means for assigning" limitation is a microprocessor programmed to perform the algorithm illustrated in one of the figures in the patent). EasyWeb's construction, which does not link the steps by which the software performs the conversion to the software itself, attempts to capture any possible software means for conversion. Section 112 is intended to prevent such pure functional claiming. Aristocrat, 521 F.3d at 1333.

Therefore, the type of message being converted, the type of software performing the conversion, and the steps the software takes must be reflected in the corresponding structure. The specification only teaches how to convert certain formats, and the disclosed conversion algorithms are specific to those formats. (*See, e.g.*, '030 Patent at Fig. 8 (fax conversion), 12:67–13:3 (telephone call into text).)¹⁶ The specification does not disclose any algorithms (or software) that can be used to convert any type of message into a webpage-compatible format. Therefore, "a network server running software," standing alone, is not "clearly associated with performance of the claimed function." *Med. Instrumentation*, 344 F.3d at 1213–14. In addition, in the context of

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¹⁶ Several of EasyWeb's "exemplary" conversion methods are incorrect. The specification describes "Active Server Pages and CGI" as a means to publish messages, not convert them. (*See* '030 Patent at 35:41–47.) "Fax gateway devices" are used to convert fax images into packets of data capable of being transmitted over the Internet, and then back into a fax. (*See id.* at 12:20–25.) The format conversion occurs later.

the '030 and '606 Patents, an Internet server performs the conversion. Although the specification teaches that a "network server . . . converts the messages into one or more webpages" ('030 Patent at 5:51–53), and that "the Internet Server need not be connected to the Internet but may be connected to other types of networks," such as "a large private network . . . established for a large corporation" (*id.* at 40:22–26), the means-plus-function claims at issue claim an "Internet message publishing system," (*e.g.*, *id.* at 45:5). Comparatively, the '247 Patent claims a "Message Publishing System" without the Internet modifier.

Accordingly, the corresponding structure is "an Internet server that converts fax, telephone call, email, or Internet Printing Protocol-transmitted messages from a format that is non-webpage compatible at least in part into a wholly webpage-compatible format by processing text, images, video, or audio contained in the message, and rendering the text, images, video, or audio in a format publishable on a webpage by using optical character recognition, speech recognition, or text, audio, video, or image conversion software."

f. "means for storing said message in at least one storage area" ('030 Patent Claims 1, 17; '606 Patent Claim 1)

EasyWeb's Proposed Construction	Twitter's Proposed Construction
Structure: a central processor or network	Structure 1: a central processor connected to an
server connected to a storage area, such as an	Internet server and to a disk directory or
Internet web server, a mail server, a database,	database
a directory, or a disk directory	
	Structure 2: a central processor connected to a
	disk directory or database

The claimed function is "to store said message in at least one storage area." EasyWeb's proposed structure is exemplary, while Twitter's is too narrow. The central processor and the network server can store messages. ('030 Patent at 38:59–61 (central processor); *id.* at 5:51–54 (providing, in the "Summary of the Invention," that in one aspect, "[a] network server retrieves the message from the storage area, converts the message into one or more webpages, and places the message in the storage area"). The "storage area" can be a "disk directory" or "database" (*id.* at 42:15–17), or the Internet server (*id.* at 36:36–40 ("Preferably, an Internet server is used for the storage area because it is perfectly suited for," among other things, "storing the message.")). The Internet server also can perform other functions, such as "retriev[ing] unconverted message files stored in the storage area by the central computer and convert[ing] the files into the appropriate webpages." (*Id.* at 39:53–57.) Contrary to EasyWeb's proposal, however, the "network mail server" is not a "storage area," but where messages are held before the receiving step is complete. (*See id.* at 10:52–56 ("An alternative destination that is on or always accessible is therefore needed to receive email messages when they are sent form a sender. Typically, this is the role of a network mail server.").) Therefore, it cannot be part of a post-receipt structure.

Accordingly, the corresponding structure is "a central processor or network server connected to a disk directory, database, or Internet server."

g. "means for receiving a request for at least a portion of said message from a requestor, said request being made over the Internet" ('030 Patent Claims 1, 17; '606 Patent Claim 1)

EasyWeb's Proposed Construction	Twitter's Proposed Construction
Structure: a network server that receives a request for the message, such as a request for a Universal Resource Locator address or web address, over the Internet	Structure 1: an Internet server connected to a central processor that receives a request for the Universal Resource Locator associated with the published message via the user's hypertext web browser
	Structure 2: an Internet server connected to a central processor that receives a request for the Universal Resource Locator associated with the published message

The claimed function is "to receive a request for at least a portion of said message from a requestor, said request being made over the Internet." EasyWeb's proposed construction is exemplary, and it recites a general-purpose computer that parrots the claimed function. *See Keithley v. Homestore.com, Inc.*, 636 F. Supp. 2d 978, 991–93 (N.D. Cal. 2003) (reasoning that a "server" is equivalent to a general-purpose computer). The specification teaches one way of accomplishing the function: by receiving requests for the URL associated with the published message from a reviewer's hypertext browser. (*See* '030 Patent at 17:1–8 ("[T]he reviewer accesses, with a hypertext web browser, the Universal Resource Locator ('URL') associated with the published message. . . . The Internet server of the MPS receives the request for the message from the reviewer at step 320.").) Thus, the corresponding structure must be limited to that embodiment, and equivalents. *See, e.g., Nomos*, 357 F.3d at 1367. In addition, while EasyWeb claims this function can be accomplished using a "network server," the server that receives a request for a message over the Internet must be connected to the Internet. A network server without that qualifier may not be able to perform the recited function. (*See* '030 Patent at 40:22–26.)

Accordingly, the corresponding structure is "an Internet server connected to a central processor that receives a request for the Universal Resource Locator associated with the published message."

h. "means for retrieving at least the portion of said message from said storage area, in response to receiving said request" ('030 Patent Claims 1, 17; '606 Patent Claim 1)

EasyWeb's Proposed Construction	Twitter's Proposed Construction
Structure: a network server, such as an Internet	Structure: a central processor connected to an
server, that retrieves the message from a	Internet server and to a disk directory or
storage area in response to a request for the	database that retrieves the message using a
message, including requests by a unique ID	unique message ID

The claimed function is "to retrieve at least the portion of said message from said storage area in response to receiving said request." EasyWeb's proposal is unpersuasive because it is exemplary and claims a general-purpose computer performing the claimed function. Twitter's

proposal must be modified in light of the Court's other claim constructions. First, the specification teaches that an Internet server connected to the central processor retrieves messages from a storage area in response to a request received over the Internet. (*See* '030 Patent at 38:3–4, 39:50–52 ("The Internet Server is connected to the central processor, such as through a local area network, and has access to the storage area."), 40:11–15, Fig. 13.) A network server is not enough. (*See id.* at 40:22–26.) Second, EasyWeb claims that "the unique ID limitation is not a proper restriction on the structure," because it "is not required for the recited function of retrieving the message." (EasyWeb Markman Brief, at 17.) The specification, however, only discloses retrieving messages using a unique message ID: the message's "Retrieval Address." ('030 Patent at 38:3–6.) Thus, when a requester requests the message by a unique ID, the system must retrieve the message from the storage area using that ID. The system has no other information about how to retrieve the message. Therefore, the Court must limit the corresponding structure; the Court cannot broadly construe the structure as retrieving the message in response to any type of request. *See Nomos*, 357 F.3d at 1368.

Accordingly, the corresponding structure is "an Internet server connected to a central processor that retrieves the message using a unique message ID."

i. "means for sending at least the portion of said message to said requester over the Internet only if said sender has been identified as an authorized sender" ('030 Patent Claims 1, 17; '606 Patent Claim 1)

EasyWeb's Proposed Construction	Twitter's Proposed Construction
Structure: an Internet server connected to the Internet	Structure 1: a central processor and Internet server connected to the Internet and a public switched telephone network that publishes the message using the algorithm disclosed in Fig. 3 of the specification
	Structure 2: a central processor and Internet server connected to the Internet that publishes the message using the algorithm disclosed in Fig. 3 of the specification

The claimed function is "to send at least a portion of said message to said requester over the Internet only if said sender has been identified as an authorized sender." EasyWeb's construction is inadequate on its face. It constitutes nothing more than a general-purpose computer performing the claimed function. See, e.g., Keithley, 636 F. Supp. 2d at 991–93; see also Ergo, 673 F.3d at 1363–64 (concluding that "recitation of 'control device' provides no more structure than the term 'control means' itself, rather it merely replaces the word 'means' with the generic term 'device'"). Further, the function of sending a message to a requester only after the sender is identified as an authorized sender requires special programming, not "merely plugging in a general-purpose computer." 673 F.3d at 1365. Here, the only identified algorithm for sending a

message to a requester is disclosed in Figure 3 of the specification.¹⁷ Pursuant to Figure 3, the Internet server receives the request for the message from the reviewer, and the system then checks to see if the requested message is scheduled to be reviewable. ('030 Patent at 16:55–17:9.) If the message is scheduled to be reviewable, the requested message is retrieved from the user's storage area. The system then will determine if the message is public or private and, if private, whether the reviewer is authorized to review the message. (*Id* at 17:18–37.) The specification does not indicate that the corresponding structure requires the central processor to be involved in the publishing of the message.

Accordingly, the corresponding structure is "an Internet server connected to the Internet that publishes the message using the algorithm disclosed in Fig. 3 of the specification."

j. "means for testing said received message for compliance with said security scheme" ('030 Patent Claim 1)

EasyWeb's Proposed Construction	Twitter's Proposed Construction
Structure: a central processor that discards	Structure: a central processor that receives
messages or terminates calls if they are not	messages via fax, phone, email, or the Internet
from a valid user, including where the system	Printing Protocol, and that uses a caller ID
cannot identify the sender as an authorized user	signal, DTMF tones, the called number ID
based on identification ("ID") signals	signal, email headers, or data in fax packets or
	Internet Printing Protocol (IPP) packets, or
	optical or speech recognition technology to
	identify a user

The claimed function is "to test said received message for compliance with said security scheme." Per the specification, the system tests for compliance with the security scheme by comparing the ID signals received with the message to the ID signals stored in the system to identify the user, similar to the algorithm for identifying the sender of a message as an authorized sender. (*See* '030 Patent at 10:65–13:50.) Thus, in the absence of a different disclosure in the specification, the Court adopts the same corresponding structure as for the "means for identifying" term: "a central processor that, after receiving a message via tax, telephone call, email, or the Internet Printing Protocol, identifies the sender using a caller ID signal, DTMF tones, the called number ID signal, email headers, text within an email message or name of an attachment to an email message, fax terminal ID, digital signatures, data in fax packets or Internet Printing Protocol packets, or optical or speech recognition technology." ¹⁸

¹⁷ That a person of ordinary skill in the art "would know how to use off-the-shelf software running on an operating system . . . to implement such application programs" (EasyWeb Markman Reply, at 27) does not mean that the patentee can avoid claiming a specific algorithm in this case. *See Med. Instrumentation*, 344 F.3d at 1213–14.

¹⁸ This construction renders the "means for testing" element superfluous, but nothing in the specification distinguishes it from the "means for identifying" limitation. EasyWeb's structure also is not an adequate alternative; it only describes what happens after a message is tested: the central processor discards the message if it fails the test. This structure is insufficient because it fails to "describe[] how the function is performed," and instead "describes the outcome of performing the function." *Aristocrat*, 521 F.3d at 1334; *see also Encyclopaedia Britannica, Inc. v. Alpine Elecs., Inc.*, 355 F. App'x 389, 395 (Fed. Cir. 2009) ("At best, the specification . . . discloses only the functional result claimed by

k. "means for providing at least a portion of said message to at least one third party storage area only if said sender has been identified as an authorized sender" ('606 Patent Claim 18)

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EasyWeb's Proposed Construction	Twitter's Proposed Construction
Structure: a central processor that sends a	Structure 1: a central processor that receives
user's published messages to a third party's	messages via fax, telephone call, email, or the
web server using a protocol	Internet Printing Protocol, and that sends a
	user's published messages to a third party's
	web server using the FTP protocol, and that
	supplies a username and password to the third
	party server each time that a message is
	transferred to the third party server
	Structure 2: a central processor that receives
	messages via fax, telephone call, email, or the
	Internet Printing Protocol, and that sends a
	user's published messages to a third party's
	web server using the FTP protocol, and that
	supplies a username and password to the third
	party server each time that a message is
	transferred to the third party server if the third
	party server requires a username and password
	1 7 1
	before it will accept any files

The parties agree that the claimed function is "to provide at least a portion of said message to at least one third party storage area only if said sender has been identified as an authorized sender." They also agree that the central processor must send the published messages. EasyWeb relies on *Katz* to avoid identifying anything beyond a "central processor" as the corresponding structure, and it uses exemplary language. That approach is, again, incorrect.

First, *Katz* does not apply whenever a claim requires "sending" data. In *Function Media*, the Federal Circuit held a claim reciting a "means for transmitting" invalid as indefinite because the specification failed to describe "how the software performs the transmission function." 708 F.3d at 1318 (noting that, at most, the "specification discloses that the structure behind the function of transmitting is a computer program that transmits"); *see also Personalized Media Commc'n*, *LLC v. Motorola, Inc.*, 2:08-CV-70-CE, 2011 WL 4591898, at *40–41 (E.D. Tex. Sept. 30, 2011) (rejecting application of *Katz* exception to functions of transferring information from a decoder to a processor and selecting receiving television programming from a receiver or storage device). Thus, the structure cannot be "simply an abstraction that describes the function' to be performed." *Function Media*, 708 F.3d at 1318 (quoting *Blackboard*, 574 F.3d at 1383). Second, the specification only discloses one protocol for sending messages to a third party server: the FTP protocol. ('030 Patent at 42:63–66 ("The system could be configured to save the users' published messages to the third party's web server by sending the message to the third party server using a

this limitation. . . . Thus, Britannica's proposed one-step algorithm amounts to pure functional claiming, which does not comply with the disclosure requirement of $\S 112 \P 6$.").

protocol such as FTP (file transfer protocol).").) The corresponding structure therefore is limited to structures using that protocol, and equivalents. *Lockheed Martin*, 324 F.3d at 1318. The specification also teaches that "[i]f the third party server requires a username and password before it will accept any files, the system could be figured to supply such info each time that a message file needs to be transferred to the third party server." ('030 Patent at 42:67–43:3.) The corresponding structure must reflect that disclosure as well.

Accordingly, the corresponding structure is "a central processor that receives messages via fax, telephone call, email, or the Internet Printing Protocol, and that sends a user's published messages to a third party's web server using the FTP protocol, and that supplies a username and password to the third party server each time that a message is transferred to the third party server if the third party server requires a username and password before it will accept any files."

1. Nature of the Claims in the '247 and '372 Patents

Twitter argues that the asserted claims of the '247 and '372 Patents are means-plus-function claims. Because this is immaterial to the Court's infringement and invalidity analyses, the Court need not determine the nature of the '247 and '372 Patents at this juncture.

III. MOTIONS FOR SUMMARY JUDGMENT

Having construed the relevant disputed claim terms, the Court now addresses the parties' summary judgment motions on the issues of invalidity and infringement. Throughout this analysis, the Court applies the pre-America Invents Act version of Title 35 of the U.S. Code.

A. Standard of Review

The well settled standard for summary judgment under Federal Rule of Civil Procedure 56 applies in patent cases. *E.g.*, *Becton Dickinson & Co. v. C.R. Bard. Inc.*, 922 F.2d 792, 795–96 (Fed. Cir. 1990). Pursuant to Rule 56(a), a court may grant a motion for summary judgment only if "the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a); *Gonzalez v. City of Schenectady*, 728 F.3d 149, 154 (2d Cir. 2013). The moving party bears the burden of showing that he is entitled to summary judgment. *See Huminski v. Corsones*, 396 F.3d 53, 69 (2d Cir. 2005). "A party asserting that a fact cannot be or is genuinely disputed must support the assertion by: (A) citing to particular parts of materials in the record, including depositions, documents, electronically stored

¹⁹ When deciding issues in a patent case, a district court applies the law of the circuit in which it sits to non-patent issues and the law of the Federal Circuit to issues of substantive patent law. *E.g.*, *In re Cambridge Biotech Corp.*, 186 F.3d 1356, 1368 (Fed. Cir. 1999); *Amana Refrigeration, Inc. v. Quadlux, Inc.*, 172 F.3d 852, 856 (Fed. Cir. 1999). A "procedural issue that is not itself a substantive patent law issue is nonetheless governed by Federal Circuit law if the issue 'pertain[s] to patent law,' if it 'bears an essential relationship to matters committed to [the Federal Circuit's] exclusive control by statute,' or if it 'clearly implicates the jurisprudential responsibilities of [the Federal Circuit] in a field within its exclusive jurisdiction." *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1359 (Fed. Cir. 1999) (en banc) (internal citations omitted); *accord Advanced Cardiovascular Sys., Inc. v. Medtronic, Inc.*, 265 F.3d 1294, 1303 (Fed. Cir. 2001) (The Federal Circuit "appl[ies] the law of the regional circuit to which the district court appeal normally lies unless 'the issue pertains to or is unique to patent law,' in which case [the Federal Circuit] will apply [its] own law to both substantive and procedural issues 'intimately involved in the substance of enforcement of the patent right." (quoting *Flex–Foot, Inc. v. CRP, Inc.*, 238 F.3d 1362, 1365 (Fed. Cir. 2001)).

information, affidavits or declarations, stipulations (including those made for purposes of the motion only), admissions, interrogatory answers, or other materials; or (B) showing that the materials cited do not establish the absence or presence of a genuine dispute, or that an adverse party cannot produce admissible evidence to support the fact." Fed. R. Civ. P. 56(c)(1). The court "is not to weigh the evidence but is instead required to view the evidence in the light most favorable to the party opposing summary judgment, to draw all reasonable inferences in favor of that party, and to eschew credibility assessments." *Amnesty Am. v. Town of W. Hartford*, 361 F.3d 113, 122 (2d Cir. 2004) (quoting *Weyant v. Okst*, 101 F.3d 845, 854 (2d Cir. 1996)); *see Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986) (summary judgment is unwarranted if "the evidence is such that a reasonable jury could return a verdict for the nonmoving party").

Once the moving party has met its burden, the opposing party "must do more than simply show that there is some metaphysical doubt as to the material facts [T]he nonmoving party must come forward with specific facts showing that there is a *genuine issue for trial*." *Caldarola v. Calabrese*, 298 F.3d 156, 160 (2d Cir. 2002) (alteration in original) (quoting *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586–87 (1986)). As the Supreme Court stated in *Anderson*, "[i]f the evidence is merely colorable, or is not significantly probative, summary judgment may be granted." 477 U.S. at 249–50 (citations omitted). Indeed, "the mere existence of *some* alleged factual dispute between the parties alone will not defeat an otherwise properly supported motion for summary judgment." *Id.* at 247–48. Thus, the nonmoving party may not rest upon mere conclusory allegations or denials but must set forth "concrete particulars" showing that a trial is needed. *R.G. Grp., Inc. v. Horn & Hardart Co.*, 751 F.2d 69, 77 (2d Cir. 1984) (quoting *SEC v. Research Automation Corp.*, 585 F.2d 31, 33 (2d Cir. 1978)). Accordingly, it is insufficient for a party opposing summary judgment "merely to assert a conclusion without supplying supporting arguments or facts." *BellSouth Telecomms., Inc. v. W.R. Grace & Co.*, 77 F.3d 603, 615 (2d Cir. 1996) (quoting *Research Automation Corp.*, 585 F.2d at 33).

B. Invalidity of the Patents-in-Suit

The parties cross-move for summary judgment on Twitter's claim that the patents-in-suit are invalid, pursuant to 35 U.S.C. § 101, for claiming abstract ideas. As discussed below, the Court concludes that the inventive (and non-obvious) element in the claims—the format-based authentication—is not patentable, and thus, grants summary judgment to Twitter on its claim that the patents-in-suit are invalid.²⁰

Twitter also moves for summary judgment that the patents-in-suit are anticipated or rendered obvious by the DialWeb system and a patent issued to Gregg Freishtat ("Freishtat"), and lack a written description. EasyWeb crossmoves for partial summary judgment on those invalidity defenses, arguing that (1) numerous alleged prior art references are not prior art; (2) the claimed inventions are not anticipated under Twitter's claim constructions; and (3) Twitter's evidence of obviousness, lack of written description, and lack of enablement is insufficient as a matter of law. However, because the Court concludes that the patents-in-suit are invalid under § 101, the Court need not, and does not, reach Twitter's alternative arguments for invalidity. See, e.g., Exergen Corp. v. Thermomedics, Inc., No. CV 13-11243-DJC, 2015 WL 5579800, at *7 (D. Mass. Sept. 15, 2015) ("As the asserted claims are invalid under § 101, the Court need not reach Defendants' alternative arguments for invalidity on the grounds of anticipation and obviousness under §§ 102 and 103."); Hemopet v. Hill's Pet Nutrition, Inc., No. CV-12-01908-JLS(JPRx), 2014 WL 10317302, at *3 (C.D. Cal. Nov. 24, 2014) aff'd, 617 F. App'x 997 (Fed. Cir. 2015) ("[B]ecause the Court finds that all four patents are invalid under 35 U.S.C. § 101, we need not address Defendant's § 102 and non-infringement

1. Legal Standard

"A patent shall be presumed valid," and "[t]he burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity." 35 U.S.C. § 282. An invalidity defense must be proven by clear and convincing evidence. *Microsoft Corp. v. i4i P'ship*, 131 S. Ct. 2238, 2242 (2011).

Under Section 101 of the Patent Act, the scope of patentable subject matter includes "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U.S.C. §101. However, the Supreme Court has "long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (internal quotation marks and citation omitted); *see also Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012). In applying the Section 101 exceptions, courts "must distinguish between patents that claim the building blocks of human ingenuity and those that integrate the building blocks into something more," with only the latter being eligible for patent protection. *Alice*, 134 S. Ct. at 2354 (internal alterations and quotation marks omitted) (citing *Mayo*, 132 S. Ct. at 1303).

The Supreme Court has "set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Id.* at 2355; *see also Mayo*, 132 S. Ct. at 1296–97. In particular, the Court must follow the following framework:

First, [the court] determine[s] whether the claims at issue are directed to one of those patent-ineligible concepts. If not, the claims pass muster under § 101. Then, in the second step, if [the court] determine[s] that the claims at issue are directed to one of those patent-ineligible concepts, [it] must determine whether the claims contain an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.

Ultramercial, Inc. v. Hulu, LLC, 772 F.3d 709, 714 (Fed. Cir. 2014) cert. denied sub nom. Ultramercial, LLC v. WildTangent, Inc., 135 S. Ct. 2907 (2015) (internal quotation marks, citations, and alteration omitted); see also DDR Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245, 1255 (Fed. Cir. 2014); buySAFE, Inc. v. Google, Inc., 765 F.3d 1350, 1353 (Fed. Cir. 2014). In considering the second step of the analysis, a court must "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." Alice, 134 S. Ct. at 2355 (quoting Mayo, 132 S.Ct. at 1298, 1297); see also buySAFE, Inc., 765 F.3d at 1353.

In the context of computer-implemented technology, the Supreme Court has cautioned that

arguments."); *Telebuyer, LLC v. Amazon.com, Inc.*, No. 2:13-CV-1677-BJR, 2015 WL 4493045, at *5 n.3 (W.D. Wash. July 23, 2015) ("Because this Court finds that these patents are not valid under Section 101, it will not address Amazon's Section 112 arguments.")

[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea "while adding the words 'apply it" is not enough for patent eligibility. Nor is limiting the use of an abstract idea "to a particular technological environment." Stating an abstract idea while adding the words "apply it with a computer" simply combines those two steps, with the same deficient result. Thus, if a patent's recitation of a computer amounts to a mere instruction to "implemen[t]" an abstract idea "on . . . a computer," that addition cannot impart patent eligibility. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of "additional featur[e]" that provides any "practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself."

Alice, 134 S. Ct. at 2358 (internal citations omitted); see also buySAFE, Inc., 765 F.3d at 1354 ("The Court in Alice made clear that a claim directed to an abstract idea does not move into section 101 eligibility territory by 'merely requir[ing] generic computer implementation." (alteration in original) (quoting Alice, 134 S. Ct. at 2357)).

2. Analysis

As a preliminary matter, the Court will analyze the claims together because there is no meaningful distinction between the asserted "system," "process," and "means-plus-function" claims for purposes of the Section 101 analysis. See Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada (U.S.), 687 F.3d 1266, 1276–77 (Fed. Cir. 2012). The Court looks "not just to the type of claim but also 'to the underlying invention for patent-eligibility purposes." Id. at 1276 (quoting CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1374 (Fed. Cir. 2011)). Thus, "the form of the claims should not trump basic issues of patentability." DDR Holdings, LLC v. Hotels.com, L.P., 954 F. Supp. 2d 509, 527 (E.D. Tex. 2013), aff'd in part, rev'd in part and remanded on other grounds, 773 F.3d 1245 (Fed. Cir. 2014) (citing Parker v. Flook, 437 U.S. 584, 593 (1978)). Here, the claims at issue involve format-based authentication and a central processor. There is little material difference between these categories of claims for purposes of the patentability analysis. See Planet Bingo, LLC v. VKGS LLC, 576 F. App'x 1005, 1007 (Fed. Cir. 2014) ("[W]e agree with the district court that there is no meaningful distinction between the method and system claims or between the independent and dependent claims. The system claims recite the same basic process as the method claims, and the dependent claims recite only slight variations of the independent claims." (internal citation omitted)); DDR Holdings, LLC, 773 F.3d at 1257 n.4 ("The parties do not dispute that the asserted system and method claims of the '399 patent, for the purposes of § 101, are no different in substance. . . . Thus, the form of the asserted claims (system or method) does not affect our analysis of their patent eligibility." (citing Alice, 134 S.Ct. at 2360)).

Twitter argues that the patents-in-suit are directed to the abstract idea of "authenticating a user based on the format of the user's message," just like the "idea of structuring an insurance claims processing system to generate tasks automatically in response to events." (Twitter July 3, 2014 Post-*Alice* Letter, at 1.) It further argues that language of the claims "adds nothing to the

²¹ Twitter did not specifically identify the abstract idea in its pre-*Alice* briefing.

abstract idea of format-dependent authentication"; each function performed by the central processor is "purely conventional"; and that, "[u]nder the logic of *Alice*, if 'one or more computers' collectively performing a set of conventional functions is unpatentable, a single computer performing the same set of conventional functions is not patentable either." (*Id.* at 2–4.) EasyWeb argues that the patents "claim a concrete Internet-based message-publishing system that is capable of publishing information received in a variety of forms and adapting its security scheme to the formats of that information," allowing automated publishing to a website. (EasyWeb July 3, 2014 Post-*Alice* Letter, at 1, 3.) It further argues that "[h]umans alone do not and cannot implement" the identification and conversion components of the patents-in-suit; the patents cannot claim an abstract idea merely because they are implemented with a computer; and, under either parties' construction, the central processor is a concrete and necessary part of the inventive implementation. (*Id.* at 3–5.) ²² Having reviewed the claims at issue, the Court concludes, under the first step of the analysis, that the inventive claims are directed toward a patent-ineligible concept.

EasyWeb presents a broad conception of its invention, which is designed to allow "virtually anyone to automatically create a new website, complete with multiple webpages, by using just a telephone or fax machine" or email, without needing technical knowledge of web publishing software ('030 Patent at 44:61–64; '247 Patent at 2:65–3:21). The inventive (and non-obvious) concept in the patents-in-suit, however, is the format-based authentication system, not the message publishing system itself. As noted *supra*, Polish concedes that Codignotto's invention was not particularly innovative. (See Polish Dep. at 168:25–169:1 ("I'm not exactly sure that I know what is new here, but I think Mr. Codignotto's contributions have to do with organizing existing pieces of technology in new ways.").) "[W]hen determining whether [the patents-in-suit] contain[] an adequate inventive concept, the Court must factor out conventional activity" because "where a claim recites tangible steps, but the only new part of the claim is an abstract idea, that may constitute a claim to an abstract idea." McRo, Inc. v. Atlus U.S.A., No. SACV 13-1870-GW(FFMx), 2014 WL 4772196, at *9 (C.D. Cal. Sept. 22, 2014) (citing Alice, 134 S. Ct. at 2358; Mayo, 132 S. Ct. at 1297–98); see also Mayo, 132 S. Ct. at 1297–98 (claim step calling for administration of drug only disregarded because it "refers to the relevant audience, namely doctors who treat patients with certain diseases with thiopurine drugs"; claim step of determining level of relevant metabolites disregarded because it was "well known in the art"). Nevertheless, the Court must "consider the invention as a whole, rather than 'dissect[ing] the claims into old and new elements and then . . . ignor[ing] the presence of the old elements in the analysis." Bilski v. Kappos, 561 U.S. 593, 611 (2010) (quoting Diamond v. Diehr, 450 U.S. 175, 188 (1981)). Thus, the Court must focus on the inventiveness of the format-based authentication element, without ignoring the asserted claims as a whole.

The Supreme Court has declined to "delimit the precise contours of the 'abstract ideas' category." *Alice*, 134 S. Ct. at 2357; *see also Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) *cert. denied*, 136 S. Ct. 119 (2015).

²² In its December 15, 2014 letter, EasyWeb takes issue with Twitter's characterization of its claims as "directed to the abstract idea of authenticating a user based on the format of the user's message," arguing that "EasyWeb's patents recite a 'message publishing system,' not a user authentication system." (EasyWeb Dec. 15 Letter, at 2–3.) However, the Court agrees with Twitter, that considering EasyWeb's claims as a message publishing system would not change the analysis because a message publishing system is also an abstract idea, for the reasons discussed *supra*.

Courts have previously recognized that "mathematical algorithms, including those executed on a generic computer" as well as "fundamental economic and conventional business practices," are abstract ideas. *DDR Holdings, LLC*, 773 F.3d at 1256 (citing *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972); *Bilski*, 561 U.S. at 611–12; *Alice*, 134 S. Ct. at 2356). However, the Federal Circuit has indicated that the abstract ideas category is broad, *see*, *e.g.*, *Digitech Image Techs.*, *LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) ("The Supreme Court recently reaffirmed that fundamental concepts, by themselves, are ineligible abstract ideas."), and courts have held that claims that do "not neatly fit into these precedents" nevertheless were directed to abstract ideas, *Morales v. Square*, 75 F. Supp. 3d 716, 724 (W.D. Tex. 2014) (collecting cases). "Taken together, the case law suggests that a claim is directed to an abstract idea when it describes a fundamental concept or longstanding practice." *Id.* at 724 (citing *Cal Inst. Of Tech. v. Hughes Comme'ns Inc.*, 59 F. Supp. 3d 974, 981–84, 985–89, 991–92 (C.D. Cal. 2014)).

Although EasyWeb argues that its patents "claim a solution 'necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,' i.e., on-demand Internet publishing," (EasyWeb Dec. 15, 2014 Letter, at 2 (quoting DDR Holdings, LLC, 773 F.3d at 1257)), the Court concludes that EasyWeb's patents are directed to an abstract idea of authentication. Courts have previously found that patents involving the transformation and transmission of information in one form to another form constituted abstract ideas. For example, in Content Extraction & Transmission LLC, the Federal Circuit affirmed the district court's determination that patents at issue, which involved a method of extracting data from hard copy documents (i.e., checks) using a digitized unit such as a scanner, recognizing that information, and populating certain data fields with that information in the computer's memory, fell within the excluded category of abstract ideas. 776 F.3d at 1345, 1347. In making this determination, the Federal Circuit specifically rejected the argument that the claims were not abstract "because human minds are unable to process and recognize the stream of bits output by a scanner," noting that "the claims in Alice also required a computer that processed streams of bits, but nonetheless were found to be abstract." Id. at 1347. Similarly, in Morales, the district court found that the patent at issue, a system that allowed television viewers to respond to offers for products displayed on the television with a remote control and transmitted a signal accepting the offer to a repeater station where it was relayed to a central data collection system to be processed, "encompasse[d] an abstract idea because it describe[d] the fundamental concept of relaying a signal containing the sender's identity" and "simply describe[d], at a high level of generality, the concept of transmitting data from one source to another" through either radio frequency or telephone lines. 75 F. Supp. 3d at 725; see also Parus Holdings, Inc. v. Bank, - - F. Supp. 3d - -, No. 14-CV-1427 (SLR), 2015 WL 5886179, at *9 (D. Del. Oct. 8, 2015) (finding that "automated tasks of (1) receiving messages via a phone or Internet connection and then transmitting those messages to a subscriber by phone or Internet; and (2) receiving a message from a subscriber by phone or Internet and then forwarding that message based on rules established by the subscriber" had "pre-Internet analogs" and thus, "suggest[ed] methods of organizing human (business) activity and, therefore, an abstract idea."). Thus, the Court finds EasyWeb's claims are directed to a patent-ineligible concept.

Turning to the second step of the *Alice* framework, the Court concludes that EasyWeb's claims do not include an inventive concept "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Alice*, 134 S. Ct. at 2355. "To answer the second question, [a court must] consider the limitations of each claim both

individually and as an ordered combination to determine whether the additional limitations transform the nature of the claim into patent-eligible application of a patent-ineligible concept." *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1332 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2355). These additional limitations must be "more than simply stating an abstract idea while adding the words 'apply it' or 'apply it with a computer.' Similarly, the prohibition on patenting an ineligible concept cannot be circumvented by limiting the use of an ineligible concept to a particular technological environment." *Id.* (citing *Alice*, 134 S. Ct. at 2358).

EasyWeb argues that its patents "claim computer-implementation as a necessary component of the invention, not merely as a convenient platform for reduction. The necessity of the computer-implementation provides, in part, the 'inventive concept' of the patents-in-suit." (EasyWeb July 3, 2014 Post-Alice Letter, at 4.) EasyWeb further argues that its patents "direct the practitioner to do far more than merely 'implement the abstract idea . . . on a generic computer." (Id. (citing Alice, 134 S. Ct. at 2359).) However, the Court has construed the "central processor" as "a computer or set of computers, where one computer performs all the functions assigned to the central processor that are necessary for the MPS to process a given message." See supra at II.B.1.e. Under such a construction, the central processor is a "generic computer," which "cannot transform a patent-ineligible abstract idea in to a patent-eligible invention." Alice, 134 S. Ct. at 2358; see also id. at 2360 ("[W]hat petitioner characterizes as specific hardware—a 'data processing system' with a 'communications controller' and 'data storage unit,' for example, . . . —is purely functional and generic. Nearly every computer will include a 'communications controller' and 'data storage unit' capable of performing the basic calculation, storage, and transmission functions required by the method claims. As a result, none of the hardware recited by the system claims offers a meaningful limitation beyond generally linking the use of the method to a particular technological environment, that is, implementation via computers." (internal quotation marks and citation omitted)).²³ Further, although the Court has limited the "means for identifying" element to a "central processor that, after receiving a message via tax, telephone call, email, or the Internet Printing Protocol (IPP), identifies the sender using a caller ID signal, DTMF tones, the called number ID signal, email headers, text within an email message or name of an attachment to an email message, fax terminal ID, digital signatures, data in fax packets or IPP packets, or optical or speech recognition technology," see supra II.B.2.d., such functions are "well-understood, conventional, routine activity," Mayo, 132 S. Ct. at 1298; see also Morales, 75 F. Supp. 3d at 726– 27 ("The listed devices [antennae to send and receive radio frequencies, computers to verify and process data, VSAT equipment to allow for satellite communication, modems for telephonic communication, and conventional electronics included in answering device] are included in the claimed process for their generic purposes, and as such represent well-understood, conventional, routine activity." (internal quotation marks and citation omitted)).

Further, EasyWeb's claims also fail to satisfy the machine-or-transformation test. Under the machine-or-transformation test, "[a] claimed process can be patent eligible under § 101 if '(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." *Ultramercial, Inc.*, 772 F.3d at 716 (quoting *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (en banc), *aff'd on other grounds*, 561 U.S. 593). "While the Supreme Court has held

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²³ The Court notes that even under EasyWeb's proposed construction of "central processor" as "one or more computers as part of a system," the central processor would constitute a generic computer.

that the machine-or-transformation test is not the sole test governing § 101 analyses, . . . that test can provide a 'useful clue' in the second step of the Alice framework." Id. (quoting Bilski, 561 U.S. at 604)). EasyWeb's claims are not "tied to any particular novel machine or apparatus, only a general purpose computer," which the Federal Circuit has held to be insufficient "to save the patent under the machine-or-transformation test." Id. (citing CyberSource, 654 F.3d at 1370). Further, "[a]ny transformation from the use of computers or the transfer of content between computers is merely what computers do and does not change the analysis." Id. To the extent that EasyWeb argues that it satisfies the transformation prong by converting a message from one format to another, the Federal Circuit made clear in CyberSource that "mere manipulation or reorganization of data . . . does not satisfy the transformation prong." 645 F.3d at 1375; see also Glory Licensing LLC v. Toys R Us, Inc., No. 09-CV-4252 (FSH), 2011 WL 1870591, at *4 (D.N.J. May 16, 2011) (holding a "mere transfer' of data from an electronic or hard copy document to an application program" did not constitute transformation of the underlying data); Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n, No. 12-CV-2501 (MAS)(TJB), 2013 WL 3964909, at *13 (D.N.J. July 31, 2013), aff'd, 776 F.3d 1343 (Fed. Cir. 2014) (rejecting the argument that the patents at issue passed the transformation prong by using a "scanner to transform ink-on-paper into bit-mapped pixels" and using a computer to transform "the bit-mapped pixels into machine-readable variable (or field) values stored in targeted memory locations.") The Court is not persuaded by EasyWeb's argument that "by adding hypertext formatting, EasyWeb's patents go beyond manipulating, reorganizing, or collecting data by actually adding a new subset of numbers or characters to the data, thereby fundamentally altering the original information." (EasyWeb Dec. 15, 2014 Letter, at 5 (internal quotation marks and citation omitted).) If such a notion was true, any conversion of material from one form to a different electronic form, would constitute a transformation, an outcome clearly at odds with the Federal Circuit's determination that "mere manipulation or reorganization of data . . . does not satisfy the transformation prong." CyberSource, 645 F.3d at 1375. Thus, EasyWeb's conversion of a message from one format to another for publication is insufficient to satisfy that transformation prong of the machine-ortransformation test.

Because EasyWeb's claims are directed to a patent ineligible concept and do not include an inventive concept sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself, the Court grants summary judgment to Twitter on its claim that the patents-in-suit are invalid, pursuant to 35 U.S.C. § 101, for claiming abstract ideas that are not patentable.

C. Infringement of the Patents-in-Suit

Even assuming EasyWeb's patents-in-suit were patentable, the Court concludes, in the alternative, that Twitter's technology does not infringe EasyWeb's patents. Twitter moves for summary judgment of noninfringement on the grounds that its authentication mechanisms do not depend on the "format of the message," it does not have a "central processor" because each step in its message publishing process is performed by a separate cluster of computers in the Sacramento data center, and its system does not read upon the means-plus function claims either literally or under the doctrine of equivalents. As construed by the Court, the patents-in-suit claim an authentication mechanism that depends on "message encoding that determines how the information, data, or content the sender wishes to publish on the Internet is reviewed." In addition,

all the functions assigned to the central processor that are necessary for the MPS to process a given message must be handled by one computer. EasyWeb also concedes that Twitter does not infringe the means-plus-function claims if the Court adopts Twitter's corresponding structures for those terms. Therefore, as discussed below, the Court concludes that Twitter's technology does not infringe the patents-in-suit as matter of law.

1. Legal Standard

Pursuant to 35 U.S.C. § 271(a), an actor is liable for direct infringement if she commits all the elements of infringement, such as the making, using, or selling of a patented invention. *See Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 709 F.3d 1348, 1362 (Fed. Cir. 2013); *see also Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 773 (Fed. Cir. 1993). The inquiry has two steps: first, the court must construe the asserted patent claims—a question of law. *Cybor Corp.*, 138 F.3d at 1454. Second, the court must determine "whether the claims, as properly interpreted, cover the accused device or process"—a question of fact. *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1998). The actor must perform each and every step or element of a claimed method or product; if any claim limitation is absent from the accused device or method, there is no literal infringement as a matter of law. *Cephalon, Inc. v. Watson Pharm., Inc.*, 769 F. Supp. 2d 729, 746 (D. Del. 2011) *aff'd in part, rev'd in part on other grounds*, 707 F.3d 1330 (Fed. Cir. 2013) (citations omitted). The patentee or assignee has the burden of proving infringement by a preponderance of the evidence. *SmithKline*, 859 F.2d at 889. Infringement may be shown through direct and circumstantial evidence. *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1272 (Fed. Cir. 1986).

Literal infringement of a means-plus-function claim requires that the relevant structure in the accused device (1) perform the identical function recited in the claim and (2) be identical or "otherwise insubstantially different" to the corresponding structure in the specification. Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1364 (Fed. Cir. 2000) (citation omitted). An accused structure is statutorily equivalent if it "performs the claimed function in substantially the same way to achieve substantially the same result." Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999). If a component of an accused product is not a structural "equivalent" to the corresponding structure of a means-plus-function limitation for purposes of the literal infringement analysis, then the same structure cannot be equivalent for purposes of the common law doctrine of equivalents, "unless the component constitutes technology arising after the issuance of the patent." Interactive Pictures Corp. v. Infinite Pictures, Inc., 274 F.3d 1371, 1381 (Fed. Cir. 2001) (citing Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1311 (Fed. Cir. 1998)). Nevertheless, infringement under the doctrine of equivalents is not automatically precluded if the finding of noninfringement "is premised on an absence of identical function." Id. at 1381-82 (citing WMS Gaming, 184 F.3d at 1353). "That is because infringement under the doctrine of equivalents may be premised on the accused and the patented component having substantially the same function, whereas structure corresponding to the disclosed limitation in a means-plus-function clause must perform the identical function." Id. at 1382 (citing WMS Gaming, 184 F.3d at 1353).

2. Analysis

It is undisputed that Twitter receives every message from a web browser, mobile application, or mobile phone in a text, gif, jpg, or png format, or a combination thereof. (Clark Noninfringement Report ¶¶ 163–66.) Tweets from a browser or mobile application are authenticated through the sender's username and password, which are associated with a cookie (for web tweets) or an OAuth token (for mobile tweets). (Id. ¶ 168.) SMS and MMS tweets are authenticated using the phone number transmitted with the user's message. (Id.) Clark opines that "Twitter does not select a different identification/authorization mechanism depending on whether it receives text or JPG-, GIF-, or PNG-formatted image" as a tweet. (Id. ¶ 164.) He also explains that "pictures in any of the supported formats may be posted (without conversion) from" any of the transmission methods. (Id.) Even if Clark's opinion were inadmissible, EasyWeb has no evidence that Twitter's authentication mechanism depends on the "format of the message" as construed by the Court. EasyWeb relies on Polish's infringement opinion, but that is premised on a construction of "format" that encompasses the transport protocol and transmission headers applied to the message when it is sent to Twitter. Because "evidence based upon a mistaken construction of a patent is irrelevant," Chicago Mercantile Exch., Inc. v. Tech Research Grp., LLC, 782 F. Supp. 2d 667, 673 (N.D. Ill. 2011), a rational jury cannot rely on Polish's expert opinion to find that Twitter's system satisfies the "format of the message" limitation. 24 See Intellectual Sci. & Tech., Inc. v. Sony Elecs., Inc., 589 F.3d 1179, 1183 (Fed. Cir. 2009) ("To satisfy the summary judgment standard, a patentee's expert must set forth the factual foundation for his infringement opinion in sufficient detail for the court to be certain that features of the accused product would support a finding of infringement under the claim construction adopted by the court, with all reasonable inferences drawn in favor of the non-movant."); ASUS Computer Int'l v. Round Rock Research, LLC, Case No. 12-cv-02099 JST (NC), 2014 WL 1463609, at *5 (N.D. Cal. Apr. 11, 2014) ("It is . . . appropriate to exclude expert opinion based on an incorrect claim construction." (citing, inter alia, Liquid Dynamics Corp. v. Vaughan Co., 449 F.3d 1209, 1224 n.2 (Fed. Cir. 2006))). Therefore, because Twitter's authentication mechanisms do not depend on the "format of the message," its system does not infringe the asserted claims of the patents-in-suit as a matter of law. See Cephalon, 769 F. Supp. 2d at 746.

Similarly, no rational jury could conclude that Twitter's data center reads upon the "central processor" limitation. It is undisputed that Twitter uses a distributed architecture and that no single machine in the data center identifies the sender of the message and performs an additional required function. (See Clark Noninfringement Report ¶¶ 193–95.) According to Contreras, one cluster in the data center receives tweets, a separate cluster authenticates users, and a separate cluster sends tweets to recipients. (Contreras Decl. ¶ 21.) She testified that, although she does not know how any of the computers are "connected or how many there are," the computers are "logically organized into groups called clusters . . . according to the function that they perform." (Contreras

²⁴ For example, Polish opines that "the sending of the cookie along with the message is part of the format." (Polish Dep. at 68:6–7.) He concludes that a tweet sent by the web is in a different format than that sent by a mobile application because one uses cookies for authentication and one uses an access token. (*Id.* at 67:15–68:2.) That assumes a difference in format because the authentication mechanism varies, not because the format is different.

²⁵ EasyWeb argues that Contreras's testimony should be disregarded because she testified that she "know[s] next to nothing about the hardware setup." (Contreras Dep. at 135:2–3.) The Court disagrees. Contreras indicated that the "architecture" of the data center could be the hardware architecture or software architecture—"the physical setup

Dep. at 135:9–18, Li Decl. Ex. I.) EasyWeb does not raise a genuine dispute of material fact as to whether any single data center cluster performs all the functions required of the central processor by the respective claims. It only argues that the data center is the "central processor" because the computers are indisputably connected together to perform the claimed functions, such as receiving tweets, authenticating users, and sending tweets to be published. (EasyWeb MSJ Opp., at 21.) Other than with respect to Claim 18 of the '606 Patent, which only requires "at least one of said means [to] utilize[] the central processor to perform its recited function" ('606 Patent at 46:28–30), that is insufficient. *See Intellectual Sci. & Tech.*, 589 F.3d at 1183–84. Nevertheless, Twitter's technology cannot infringe even the '606 Patent, because the data center does not receive messages via fax, phone call, email, or the IPP.

Finally, EasyWeb concedes that Twitter does not infringe the means-plus-function claims under Twitter's claim constructions, which the Court mostly has adopted. (*See* EasyWeb MSJ Opp., at 24 & Appendix A.) The means-plus-function language also cannot be stretched to cover the web-to-web or text-to-web publishing that EasyWeb concedes was "well known in the art as of the filing date" (EasyWeb MSJ Brief, at 35), because structural equivalence is determined at the time the patent issues, not at the time of infringement. *See Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1320 (Fed. Cir. 1999) ("An equivalent structure or act under § 112 cannot embrace technology developed after the issuance of the patent because the literal meaning of a claim is fixed upon its issuance.").

Therefore, because Twitter's system does not read upon the Court's constructions of "format" or "central processor," or the means-plus-function claims, Twitter's system does not infringe any of the asserted independent or dependent claims of the patents-in-suit as a matter of law. Accordingly, the Court grants summary judgment of noninfringement to Twitter.²⁶

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versus the logical setup." (*Id.* at 134:2–7.) EasyWeb focuses on the physical setup, but the language of the claims and Contreras's testimony indicate that it is the software setup that dictates what functions the computers perform. Thus, the evidence is admissible.

²⁶ In the alternative, assuming *arguendo* that Twitter infringes the patents-in-suit, Twitter argues that the Court should exclude the analysis of EasyWeb's damages expert, Michael Wagner ("Wagner"), and, consequently, grant summary judgment to Twitter because EasyWeb has no admissible evidence of damages. Courts cannot "apply a different claim construction for computation of damages than for infringement liability." *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1364 (Fed. Cir. 2004). Thus, EasyWeb cannot carry its burden to "sufficiently [tie the expert testimony on damages] to the facts of the case." *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1315 (Fed. Cir. 2011) (quoting *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 591 (1993)) (alterations in original); *cf. Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1315–16 (Fed. Cir. 2014) (reversing district court's exclusion of proposed expert testimony on damages because, *inter alia*, court based its damages analysis on incorrect claim construction), *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). However, the Court need not address this issue in light of the finding of non-infringement.

IV. CONCLUSION

For the foregoing reasons, the Court grants summary judgment to Twitter on the patentability of abstract ideas defense pursuant to 35 U.S.C. § 101, and also grants summary judgment of noninfringement to Twitter. EasyWeb's motion for summary judgment is denied. The Clerk of the Court shall enter judgment accordingly and close the case.

SO ORDERED.

JOSEPH F. BIANCO
United States District Judge

Dated: March 30, 2016 Central Islip, NY

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